

L Number	Hits	Search Text	DB	Time stamp
1	2788	514/23	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:43
2	23	514/23 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:51
3	1958	514/25	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:44
4	11	514/25 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:45
5	3923	514/54	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:45
6	99	514/54 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:46
7	54	(514/54 and polygalacturon\$) and (food or drink or beverage or nutraceutical)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:50
8	152	514/674	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:50
9	3	514/674 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:51
-	4373	polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 13:43
-	3736	polygalacturon\$ and composition	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:09
-	1713	(polygalacturon\$ and composition) and (food or drink or beverage)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:10
-	163	((polygalacturon\$ and composition) and (food or drink or beverage)) and taste	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:16
-	42	polygalacturonide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:17
-	36	polygalacturonide and (food or drink or beverage)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:27
-	455	536/2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:27

-	50	536/2 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:31
-	37	(536/2 and polygalacturon\$) and (food or drink or beverage)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:30
-	0	422/658	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:31
-	3046	426/658	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:31
-	34	426/658 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:36
-	36	polygalacturonide and (food or drink or beverage)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:36
-	42	polygalacturonide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:38
-	3871	424/78	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:38
-	1	424/78 and polygalacturonide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:38
-	37	424/78 and polygalacturon\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:39
-	10	(424/78 and polygalacturon\$) and (food or drink or beverage)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/02 12:39

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal623kxg

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	May 12	EXTEND option available in structure searching
NEWS	4	May 12	Polymer links for the POLYLINK command completed in REGISTRY
NEWS	5	May 27	New UPM (Update Code Maximum) field for more efficient patent SDIs in CAPLUS
NEWS	6	May 27	CAPLUS super roles and document types searchable in REGISTRY
NEWS	7	Jun 28	Additional enzyme-catalyzed reactions added to CASREACT
NEWS	8	Jun 28	ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG, and WATER from CSA now available on STN(R)
NEWS	9	Jul 12	BEILSTEIN enhanced with new display and select options, resulting in a closer connection to BABS
NEWS	10	Jul 30	BEILSTEIN on STN workshop to be held August 24 in conjunction with the 228th ACS National Meeting
NEWS	11	AUG 02	IFIPAT/IFIUDB/IFICDB reloaded with new search and display fields
NEWS	12	AUG 02	CAPLUS and CA patent records enhanced with European and Japan Patent Office Classifications
NEWS	13	AUG 02	STN User Update to be held August 22 in conjunction with the 228th ACS National Meeting
NEWS	14	AUG 02	The Analysis Edition of STN Express with Discover! (Version 7.01 for Windows) now available
NEWS	15	AUG 04	Pricing for the Save Answers for SciFinder Wizard within STN Express with Discover! will change September 1, 2004
NEWS	16	AUG 27	BIOCOMMERCE: Changes and enhancements to content coverage
NEWS	17	AUG 27	BIOTECHABS/BIOTECHDS: Two new display fields added for legal status data from INPADOC
NEWS	18	SEP 01	INPADOC: New family current-awareness alert (SDI) available
NEWS	19	SEP 01	New pricing for the Save Answers for SciFinder Wizard within STN Express with Discover!
NEWS	20	SEP 01	New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS EXPRESS			JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 12:47:19 ON 02 SEP 2004

=> file polymer
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'APOLLIT' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (c) 2004 FIZ Karlsruhe

FILE 'BABS' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (c) 2004 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften
licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE 'CAPLUS' ENTERED AT 12:47:33 ON 02 SEP 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CBNB' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (c) 2004 ELSEVIER ENGINEERING INFORMATION, INC.

FILE 'CEN' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 American Chemical Society (ACS)

FILE 'CIN' ENTERED AT 12:47:33 ON 02 SEP 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

FILE 'DISSABS' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 ProQuest Information and Learning Company; All Rights Reserved.

FILE 'EMA' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 Cambridge Scientific Abstracts (CSA)

FILE 'IFIPAT' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 IFI CLAIMS(R) Patent Services (IFI)

FILE 'JICST-EPLUS' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 Japan Science and Technology Agency (JST)

FILE 'PASCAL' ENTERED AT 12:47:33 ON 02 SEP 2004
Any reproduction or dissemination in part or in full,
by means of any process and on any support whatsoever
is prohibited without the prior written agreement of INIST-CNRS.
COPYRIGHT (C) 2004 INIST-CNRS. All rights reserved.

FILE 'PLASNEWS' ENTERED AT 12:47:33 ON 02 SEP 2004
Copyright (C) 2004 Bill Communications, Inc. (BCI)

FILE 'PROMT' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 Gale Group. All rights reserved.

FILE 'RAPRA' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 RAPRA Technology Ltd.

FILE 'SCISEARCH' ENTERED AT 12:47:33 ON 02 SEP 2004
Copyright (c) 2004 The Thomson Corporation.

FILE 'TEXTILETECH' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 Inst. of Textile Technology

FILE 'USPATFULL' ENTERED AT 12:47:33 ON 02 SEP 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 12:47:33 ON 02 SEP 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ACCESS NOT AUTHORIZED

FILE 'WPIFV' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 THOMSON DERWENT

FILE 'WPINDEX' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 THOMSON DERWENT

FILE 'WTEXTILES' ENTERED AT 12:47:33 ON 02 SEP 2004
COPYRIGHT (C) 2004 Elsevier Science B.V., Amsterdam. All rights reserved.

=> s polygalacturon
=> s polygalacturon?
L1 14794 POLYGALACTURON?

=> s l1 and (food or drink or composition or nutraceutical)
19 FILES SEARCHED...
L2 5250 L1 AND (FOOD OR DRINK OR COMPOSITION OR NUTRACEUTICAL)

=> s l2 and taste
L3 268 L2 AND TASTE

=> s l2 and (baby(w)food)
L4 26 L2 AND (BABY(W) FOOD)

=> dis l4 1-26 bib abs

L4 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:136346 CAPLUS
DN 90:136346
TI Radiation effects on activity and storage stability of endo-
polygalacturonase
AU Zetelaki-Horvath, Kornelia; Kiss, Istvan
CS Cent. Food Res. Inst., Budapest, Hung.
SO Acta Alimentaria Academiae Scientiarum Hungaricae (1978), 7(4), 299-307
CODEN: AAASCO; ISSN: 0302-7368
DT Journal
LA English
AB Endo-**polygalacturonase** (endo-PG) [9032-75-1] can be used in the preparation of vegetable juices and purees, **baby foods**, and similar products, if the enzyme preparation is free of microbial contamination; sterilization by γ -rays was investigated. Irradiation of endo-PG was carried out in powdered form, under aerobic conditions with a ^{60}Co source. Doses of 5 and 10 kGy (0.5 and 1.0 Mrad) γ -rays decreased the initial viable cell count ($2.6 \times 10^7/\text{g}$) of the preparation of 4 and 6 orders of magnitude, resp. The survival level showed no significant differences when the preparation was irradiated with 5, 10, and 20 kGy, whereas 40 kGy gave a practically germ-free prepn ($\leq 7/\text{g}$). The loss of endo-PG activity, as a result of irradiation was compensated by better storage stability of the irradiated samples. The use of 5, 10, 20, and 40 kGy resulted in a 6.4, 24, 30, and 40% decrease in the activity of the enzyme. On the other hand, prepn. treated with 5, 10, 20, and 40 kGy were stable, and showed only a slight loss in their resp. activity, compared to the 18% activity loss of the control.

L4 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1978:103531 CAPLUS
DN 88:103531

TI Application of endo-**polygalacturonase** to vegetables and fruits
AU Zetelaki-Horvath, Kornelia; Gatai, Katalin
CS Cent. Food Res. Inst., Budapest, Hung.
SO Acta Alimentaria Academiae Scientiarum Hungaricae (1977), 6(4), 355-77
CODEN: AAASCO; ISSN: 0302-7368
DT Journal
LA English
AB Possibilities of application of an endo-**polygalacturonase**
[9032-75-1] preparation to 18 vegetables and 11 fruits, including 2 varieties
of tomatoes, were tested, with special regard to tomato varieties
developed for mech. harvesting. The effect of enzymic disintegration
differed from vegetable to vegetable. Highest recovery of cells and
tissue particles was obtained in the case of potato, carrot, parsley,
cucumber, squash and red tomato-shaped paprika, whereas enzymic
disintegration was least effective in the case of garden sorrel and
spinach. After enzyme treatment the larger part of the vegetables
consisted of single cells, suitable for further processing into vegetable
juices, cocktails, **baby foods**, dehydrated soups and
sauces. The concentration of the juice of tomato varieties bred for mech.
harvesting could be improved by enzyme treatment, making it possible to
produce tomato concs. of 38-45% dry matter content. In the course of
enzyme treatment the loss upon straining decreased by 20% and the juice
yield increased to the same extent. The dry matter content of the
enzyme-treated samples also increased by 7% as compared to the control.
Endo-**polygalacturonase** treatment was similarly successful in the
case of fruits. The increase in the juice yield was about 20-50% higher
with the majority of fruits tested than that of the control. A
simultaneous significant decrease in viscosity and increase in light
transmittance of the samples was observed. The color of the fruit juices
became more intense as a result of the enzyme treatment.

L4 ANSWER 3 OF 26 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10075278 IFIPAT;IFIUDB;IFICDB
TI PROCESS FOR THE CONTINUOUS ISOLATION OF ACTIVE PROTEINS; PLANT EXTRACT
INF Crelier; Simon, Savigny, CH
Daury; Marc Cedric, Epalinges, CH
Juillerat; Marcel Alexandre, Lausanne, CH
Warnery; Philippe, Savigny, CH
IN Crelier Simon (CH); Daury Marc Cedric (CH); Juillerat Marcel Alexandre
(CH); Warnery Philippe (CH)

PAF Unassigned
PA Unassigned Or Assigned To Individual (68000)
AG WINSTON & STRAWN, 200 PARK AVENUE, NEW YORK, NY, 10166-4193, US
PI US 2002018831 A1 20020214
AI US 2001-859315 20010517
RLI WO 1999-EP8699 19991110 CONTINUATION UNKNOWN
PRAI EP 1998-203876 19981120
FI US 2002018831 20020214
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION

CLMN 20
AB A process for the isolation of active proteins from plant material or
from fermentation media, wherein the active proteins contained in an
enzymatic solution extracted from the plant material or from the
fermentation media are precipitated in an appropriate organic solvent,
continuously and in a single step in a specific reactor, the conditions
in the reactor being adjusted so as to obtain a precipitate of
nondenatured proteins. The precipitate is then passed through a
maturation step before being continuously separated.
CLMN 20

L4 ANSWER 4 OF 26 IFIPAT COPYRIGHT 2004 IFI on STN
AN 04024333 IFIPAT;IFIUDB;IFICDB
TI PRODUCTION OF **POLYGALACTURONIDES** AND THEIR USE AS **FOOD**

ADDITIVES; AQUEOUS SOLUTION EXTRACTION FROM PECTIN

INF Dornenburg; Heike, Berlin, DE
Lang; Christine, Berlin, DE

IN Dornenburg Heike (DE); Lang Christine (DE)

PAF Technische Universitat Berlin, Berlin, DE

PA Technische Universitat Berlin DE (7919)

EXNAM Wilson, James O

EXNAM Krishnan, Ganapathy

AG Rothwell Figg Ernst & Manbeck

PI US 6696554 B2 20040224
US 2003013678 A1 20030116
WO 2001076609 20011018

AI US 2002-9055 20020225
WO 2001-EP3998 20010406
20020225 PCT 371 date
20020225 PCT 102(e) date

PRAI DE 2000-10019076 20000406

FI US 6696554 20040224
US 2003013678 20030116

DT Utility; Granted Patent - Utility, with Pre-Grant Publication

FS CHEMICAL
GRANTED

NTE INDEXED FROM APPLICATION
Subject to any Disclaimer, the term of this patent is extended or
adjusted under 35 USC 154(b) by 3 days.

MRN 012695 MFN: 0788

CLMN 31

AB The invention relates to the use of **polygalacturonides** as
food additives, said **polygalacturonides** being
obtainable via the following process steps: a) a pectinous plant material
is subjected to a pectin extraction in aqueous solution; b) the solids
are removed from the suspension obtained in step a) , consisting of
liquid phase including dissolved pectin and solids from the plant
material; c) the pectin is precipitated from the liquid phase obtained in
step b); d) the pectin obtained in step c) is dissolved in an aqueous
solution and cleaved with purified endo-**polygalacturonase**; e)
the **polygalacturonides** obtained in step d) are processed into a
polygalacturonide preparation without using an additional
separation step and without hydrolyzing ester groups that are present.

NTE INDEXED FROM APPLICATION
Subject to any Disclaimer, the term of this patent is extended or
adjusted under 35 USC 154(b) by 3 days.

CLMN 31

L4 ANSWER 5 OF 26 PROMT COPYRIGHT 2004 Gale Group on STN

AN 95:470232 PROMT

TI Biotransformations: new routes to **food** ingredients.

AU Cheetham, Peter S.J.

SO Chemistry and Industry, (3 Apr 1995) No. 7, pp. 265(4).
ISSN: ISSN: 0009-3068.

PB Society of Chemical Industry

DT Newsletter

LA English

WC 3768

FULL TEXT IS AVAILABLE IN THE ALL FORMAT

AB Enzymes, the catalysts of the biological world, are providing new, cost
effective ways of making both traditional and innovative **food**
ingredients

L4 ANSWER 6 OF 26 USPATFULL on STN

AN 2004:189867 USPATFULL

TI Production of **polygalacturonides** and their use in **food**
additives

IN Lang, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF

Dornenburg, Heike, Berlin, GERMANY, FEDERAL REPUBLIC OF
PA Technische Universitat Berlin, Berlin, GERMANY, FEDERAL REPUBLIC OF,
10623 (non-U.S. corporation)
PI US 2004146635 A1 20040729
AI US 2004-759294 A1 20040120 (10)
RLI Division of Ser. No. US 2002-9055, filed on 25 Feb 2002, GRANTED, Pat.
No. US 6696554 A 371 of International Ser. No. WO 2001-EP3998, filed on
6 Apr 2001, UNKNOWN
PRAI DE 2000-10019076 20000406
DT Utility
FS APPLICATION
LREP ROTHWELL, FIGG, ERNST & MANBECK, P.C., 1425 K STREET, N.W., SUITE 800,
WASHINGTON, DC, 20005
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 407

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the use of **polygalacturonides** as
food additives, said **polygalacturonides** being
obtainable via the following process steps:

- a) a pectinous plant material is subjected to a pectin extraction in
aqueous solution;
- b) the solids are removed from the suspension obtained in step a),
consisting of liquid phase including dissolved pectin and solids from
the plant material;
- c) the pectin is precipitated from the liquid phase obtained in step b);
- d) the pectin obtained in step c) is dissolved in an aqueous solution
and cleaved with purified endo-**polygalacturonase**;
- e) the **polygalacturonides** obtained in step d) are processed
into a **polygalacturonide** preparation without using an
additional separation step and without hydrolyzing ester groups that are
present.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 26 USPATFULL on STN
AN 2004:27057 USPATFULL
TI Low allergenic protein variants
IN Olsen, Arne Agerlin, Kaplevej, DENMARK
Roggen, Erwin Lugo, Lyngby, DENMARK
Ernst, Steffen, Kobenhavn N, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PI US 6686164 B1 20040203
AI US 1999-417608 19991013 (9)
PRAI DK 1998-1402 19981030
DK 1998-1645 19981125
DK 1999-1417 19991004
US 1999-157429P 19991004 (60)
US 1998-111386P 19981208 (60)
US 1998-107165P 19981105 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Celsa, Bennett
LREP Lambins, Elias J.
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2362
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of selecting a protein variant having reduced immunogenicity as compared with the parent protein. This method includes the steps of screening a random peptide display package library with antibodies raised against any protein of interest, sequencing the amino acid sequence of the antibody binding peptides, or the DNA sequence encoding the antibody binding peptides, identifying epitope patterns of a protein by sequence alignment of the reactive peptide sequence, localization of epitope patterns on the primary 3-dimensional structure of the parent protein, defining an epitope area including amino acids situated within 5 Å from the epitope amino acids, and affecting antibody binding to the epitope, changing the localized epitope patterns, or amino acids defining the epitope area of the parent protein by genetic engineering mutations of a DNA sequence encoding the parent protein without impairing functionality of the protein using the emerging epitope database for eliminating amino acid substitutions creating new or duplicating existing epitope patterns, introducing the mutated DNA sequence into a suitable host, culturing the host and expressing the protein variant, and evaluating the immunogenicity of the protein variant using the parent protein as reference. The invention further relates to the protein variant and its use, as well as to a method for producing said protein variant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 26 USPATFULL on STN
AN 2003:17924 USPATFULL
TI Production of **polygalacturonides** and their use as food additives
IN Lang, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF
Dornenburg, Heike, Berlin, GERMANY, FEDERAL REPUBLIC OF
PI US 2003013678 A1 20030116
US 6696554 B2 20040224
AI US 2002-9055 A1 20020225 (10)
WO 2001-EP3998 20010406
PRAI DE 2000-10019076 20000406
DT Utility
FS APPLICATION
LREP BRUCE LONDA, NORRIS, MCLAUGHLIN & MARCUS, P.A., 220 EAST 42ND STREET,
30TH FLOOR, NEW YORK, NY, 10017
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 404

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the use of **polygalacturonides** as food additives, said **polygalacturonides** being obtainable via the following process steps:

- a) a pectinous plant material is subjected to a pectin extraction in aqueous solution;
- b) the solids are removed from the suspension obtained in step a), consisting of liquid phase including dissolved pectin and solids from the plant material;
- c) the pectin is precipitated from the liquid phase obtained in step b);
- d) the pectin obtained in step c) is dissolved in an aqueous solution and cleaved with purified endo-**polygalacturonase**;
- e) the **polygalacturonides** obtained in step d) are processed into a **polygalacturonide** preparation without using an additional separation step and without hydrolyzing ester groups that are present.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 26 USPATFULL on STN
AN 2002:32010 USPATFULL
TI Process for the continuous isolation of active proteins
IN Warnery, Philippe, Savigny, SWITZERLAND
Daury, Marc Cedric, Epalinges, SWITZERLAND
Juillerat, Marcel Alexandre, Lausanne, SWITZERLAND
Crelrier, Simon, Savigny, SWITZERLAND
PI US 2002018831 A1 20020214
AI US 2001-859315 A1 20010517 (9)
RLI Continuation of Ser. No. WO 1999-EP8699, filed on 10 Nov 1999, UNKNOWN
PRAI EP 1998-203876 19981120
DT Utility
FS APPLICATION
LREP WINSTON & STRAWN, 200 PARK AVENUE, NEW YORK, NY, 10166-4193
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 567

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for the isolation of active proteins from plant material or from fermentation media, wherein the active proteins contained in an enzymatic solution extracted from the plant material or from the fermentation media are precipitated in an appropriate organic solvent, continuously and in a single step in a specific reactor, the conditions in the reactor being adjusted so as to obtain a precipitate of nondenatured proteins. The precipitate is then passed through a maturation step before being continuously separated.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 26 USPATFULL on STN
AN 2001:67443 USPATFULL
TI Leucine aminopeptidases produced recombinantly from Aspergillus soyae
IN Schuster, Erwin, Bensheim-Auerbach, Germany, Federal Republic of
Sproessler, Bruno, Rossdorf, Germany, Federal Republic of
Titze, Kornelia, Nieder-Ramstadt, Germany, Federal Republic of
Gottschalk, Michael, Ober-Ramstadt, Germany, Federal Republic of
Khanh, Nguyen Quoc, Reichelsheim, Germany, Federal Republic of
Wolf, Sabine, Otzberg, Germany, Federal Republic of
Plainer, Hermann, Reinheim, Germany, Federal Republic of
PA Roehm GmbH, Darmstadt, Germany, Federal Republic of (non-U.S. corporation)
PI US 6228632 B1 20010508
WO 9704108 19970206
AI US 1998-11540 19980420 (9)
WO 1996-EP1430 19960401
19980420 PCT 371 date
19980420 PCT 102(e) date
PRAI DE 1995-19526485 19950720
DT Utility
FS Granted
EXNAM Primary Examiner: Carlson, Karen Cochrane; Assistant Examiner: Srivastava, Devesh
LREP Burns, Doane, Swecker & Mathis, L.L.P.
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 953

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to a recombinant deoxyribonucleic acid (DNA) which can be isolated from Aspergillus soyae, characterised in that it codes for a leucine aminopeptidase (LAP) and comprises a nucleotide sequence corresponding to the nucleotide sequence given in SEQ ID NO: 1

for the mature LAP or to a nucleotide sequence derived therefrom which hybridises under stringent conditions with the nucleotide sequence given in SEQ ID NO: 1 for the mature LAP. The invention further relates to vectors and transformed host organisms, and also relates to methods of producing LAP. Enzyme products for the production of protein hydrolysates, as well as protein hydrolysates which are produced correspondingly, also form part of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 26 USPATFULL on STN
AN 2001:36957 USPATFULL
TI Polypeptide with reduced respiratory allergenicity
IN Olsen, Arne Agerlin, Virum, Denmark
Hansen, Lars Bo, Herlev, Denmark
Beck, Thomas Christian, Birkerød, Denmark
PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 6201110 B1 20010313
AI US 2000-610751 20000706 (9)
RLI Continuation of Ser. No. US 1999-405311, filed on 20 Sep 1999, now patented, Pat. No. US 6114509 Continuation of Ser. No. US 1998-150891, filed on 10 Sep 1998, now patented, Pat. No. US 5981718 Continuation of Ser. No. US 1997-836293, filed on 12 May 1997, now patented, Pat. No. US 5856451 Continuation of Ser. No. WO 1994-DK9500497, filed on 7 Dec 1994
PRAI DK 1994-1395 19941207
DK 1994-1396 19941207
DK 1994-1397 19941207
DK 1994-1398 19941207
DK 1994-1399 19941207
DK 1994-1400 19941207
DK 1994-1401 19941207
DT Utility
FS Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
LREP Lambiris, Esq., Elias J.
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2239

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to modified polypeptides with reduced respiratory allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to **compositions** comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, **composition** for treating textiles, and **compositions** used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or **compositions** thereof for reducing the allergenicity of products for a vast number of industrial applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 26 USPATFULL on STN
AN 2000:117890 USPATFULL
TI Polypeptide with reduced allergenicity
IN Olsen, Arne Agerlin, Virum, Denmark
Hansen, Lars Bo, Herlev, Denmark
Beck, Thomas Christian, Birkerød, Denmark
PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)

PI US 6114509 20000905
 AI US 1999-405311 19990920 (9)
 RLI Continuation of Ser. No. US 1998-150891, filed on 10 Sep 1998, now patented, Pat. No. US 5981718 which is a continuation of Ser. No. US 1997-836293, filed on 12 May 1997, now patented, Pat. No. US 5856451 which is a continuation of Ser. No. WO 1995-DK497, filed on 7 Dec 1995
 PRAI DK 1994-1395 19941207
 DK 1994-1396 19941207
 DK 1994-1397 19941207
 DK 1994-1398 19941207
 DK 1994-1399 19941207
 DK 1994-1400 19941207
 DK 1994-1401 19941207
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Sayala, Chhaya D.
 LREP Zelson, Esq., Steve T., Green, Esq., Reza
 CLMN Number of Claims: 21
 ECL Exemplary Claim: 1
 DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
 LN.CNT 2255
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to **compositions** comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, **composition** for treating textiles, and **compositions** used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or **compositions** thereof for reducing the allergenicity of products for a vast number of industrial applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 26 USPATFULL on STN
 AN 2000:15622 USPATFULL
 TI Expression of phytase in plants
 IN Van Ooijen, Albert J. J., Voorburg, Netherlands
 Rietveld, Krun, Vlaardingen, Netherlands
 Hoekema, Andreas, Oegstgeest, Netherlands
 Pen, Jan, Leiden, Netherlands
 Sijmons, Peter Christian, Amsterdam, Netherlands
 Verwoerd, Teunis Cornelis, Leiden, Netherlands
 PA Mogen International and Gist-brocades N.V., Netherlands (non-U.S. corporation)
 PI US 6022846 20000208
 AI US 1998-97847 19980615 (9)
 RLI Continuation-in-part of Ser. No. US 1996-693709, filed on 7 Aug 1996, now patented, Pat. No. US 5770413 which is a continuation-in-part of Ser. No. US 1993-146424, filed on 2 Nov 1993, now patented, Pat. No. US 5593963 which is a continuation-in-part of Ser. No. US 1991-756864, filed on 11 Sep 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-586765, filed on 21 Sep 1990, now abandoned
 PRAI EP 1991-200687 19910325
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Smith, Lynette R. F.; Assistant Examiner: Zaghmout, Ousama
 LREP Morrison & Foerster LLP

CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 1265

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides for the expression of phytase in transgenic plants or plant organs and methods for the production of such plants. DNA expression constructs are provided for the transformation of plants with a gene encoding phytase under the control of regulatory sequences which are capable of directing the expression of phytase. These regulatory sequences include sequences capable of directing transcription in plants, either constitutively, or stage and/or tissue specific, depending on the use of the plant or parts thereof. The transgenic plants and plant organs provided by the present invention may be applied to a variety of industrial processes either directly, e.g. in animal feeds or alternatively, the expressed phytase may be extracted and if desired, purified before application.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 26 USPATFULL on STN
AN 2000:4652 USPATFULL
TI Cloning and expression of DNA encoding a ripening form of a polypeptide having rhamnogalacturonase activity
IN Musters, Wouter, Wipperspark 138, 3141 RD Maassluis, Netherlands
Stam, Hein, Griend 72, 1112 LG Diemen, Netherlands
Suykerbuyk, Maria E., Normandie 139, 3524 RH Utrecht, Netherlands
Visser, Jacob, Hinkeloordsweg 5, 6703 CK Wageningen, Netherlands
Verbakel, Johannes M., Ingeland 9, 3155 GC Maasland, Netherlands
PI US 6013489 20000111
AI US 1995-536150 19950929 (8)
RLI Division of Ser. No. US 1993-61062, filed on 14 May 1993, now patented, Pat. No. US 5550045
PRAI EP 1992-201403 19920515
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.
LREP Cushman Darby & Cushman
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 28 Drawing Page(s)
LN.CNT 2809

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to isolation of an Aspergillus gene encoding rhamnogalacturonase (RG-ase) and the construction of recombinant Aspergillus strains with overexpression of RG-ase. These strains can be used for the commercial production of RG-ase. RG-ase is an important enzyme in processes requiring the degradation and/or modification of pectin or modification of pectin-containing vegetable or plant cell wall material. RG-ase may be used in various applications, including the processing of fruits and vegetables, in the extraction of components from vegetable material or for improving the functionality of pectin or pectin-containing vegetable material, food material or plant cell wall material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 26 USPATFULL on STN
AN 1999:150703 USPATFULL
TI Method for improving the solubility of vegetable proteins
IN Nielsen, Per Munk, Bagsv.ae butted.rd, Denmark
Knap, Inge Helmer, Bagsv.ae butted.rd, Denmark
PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 5989600 19991123
WO 9528850 19951102

AI US 1996-716450 19960927 (8)
WO 1995-DK166 19950420
19960927 PCT 371 date
19960927 PCT 102(e) date

PRAI DK 1994-470 19940422

DT Utility

FS Granted

EXNAM Primary Examiner: Eisenschenk, Chris; Assistant Examiner: Zeman, Mary K

LREP Zelson, Esq., Steve T., Lambiris, Esq., Elias

CLMN Number of Claims: 31

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 631

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for improving the solubility of vegetable proteins. More specifically, the invention relates to methods for the solubilization of proteins in vegetable protein sources, which methods comprise treating the vegetable protein source with an efficient amount of one or more phytase enzymes, and treating the vegetable protein source with an efficient amount of one or more proteolytic enzymes. In another aspect, the invention provides animal feed additives comprising a phytase and one or more proteolytic enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 26 USPATFULL on STN

AN 1999:142125 USPATFULL

TI Polypeptide with reduced allergenicity

IN Olsen, Arne Agerlin, Virum, Denmark

Hansen, Lars Bo, Herlev, Denmark

Beck, Thomas Christian, Birkerød, Denmark

PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)

PI US 5981718 19991109

AI US 1998-150891 19980910 (9)

RLI Continuation of Ser. No. US 1997-836293, filed on 12 May 1997, now patented, Pat. No. US 5856451 which is a continuation of Ser. No. WO 1995-DK497, filed on 7 Dec 1995

PRAI DK 1994-1395 19941207

DK 1994-1396 19941207

DK 1994-1397 19941207

DK 1994-1398 19941207

DK 1994-1399 19941207

DK 1994-1400 19941207

DK 1994-1401 19941207

DT Utility

FS Granted

EXNAM Primary Examiner: Sayala, Chhaya D.

LREP Zelson, Esq., Steve T., Esq., Reza Green

CLMN Number of Claims: 12

ECL Exemplary Claim: 1

DRWN 5 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 2257

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to **compositions** comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, **composition** for treating textiles, and **compositions** used for manufacturing food and feed.

Finally the invention is directed to uses of polypeptides with reduced allergenicity or **compositions** thereof for reducing the allergenicity of products for a vast number of industrial applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 26 USPATFULL on STN
AN 1999:1779 USPATFULL
TI Method for reducing respiratory allergenicity
IN Olsen, Arne Agerlin, Virum, Denmark
Hansen, Lars Bo, Herlev, Denmark
Beck, Thomas Christian, Birkerød, Denmark
PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 5856451 19990105
WO 9617929 19960613
AI US 1997-836293 19970512 (8)
WO 1995-DK497 19951207
19970512 PCT 371 date
19970512 PCT 102(e) date
PRAI DK 1994-1395 19941207
DK 1994-1396 19941207
DK 1994-1397 19941207
DK 1994-1398 19941207
DK 1994-1399 19941207
DK 1994-1400 19941207
DK 1994-1401 19941207
DT Utility
FS Granted
EXNAM Primary Examiner: Sayala, Chhaya D.
LREP Zelson, Esq., Steve T., Agris, Esq., Cheryl H.
CLMN Number of Claims: 37
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2323

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight ($M_{sub.r}$) in the range of 1 kDa and 60 kDa. The modified polypeptides are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to **compositions** comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, **composition** for treating textiles, and **compositions** used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or **compositions** thereof for reducing the allergenicity of products for a vast number of industrial applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 26 USPATFULL on STN
AN 1998:72445 USPATFULL
TI Expression of phytase in plants
IN Van Ooijen, Albert J. J., Voorburg, Netherlands
Rietveld, Krijn, Vlaardingen, Netherlands
Hoekema, Andreas, Oegstgeest, Netherlands
Pen, Jan, Leiden, Netherlands
Sijmons, Peter Christian, Amsterdam, Netherlands
Verwoerd, Teunis Cornelis, Leiden, Netherlands
PA Gist-brocades, B.V., Delft, Netherlands (non-U.S. corporation)
Mogen International, Leiden, Netherlands (non-U.S. corporation)
PI US 5770413 19980623

AI US 1996-693709 19960807 (8)
RLI Division of Ser. No. US 1993-146424, filed on 2 Nov 1993, now patented,
Pat. No. US 5593963 which is a continuation-in-part of Ser. No. US
1991-756864, filed on 11 Sep 1991, now abandoned which is a
continuation-in-part of Ser. No. US 1990-586765, filed on 21 Sep 1990,
now abandoned
PRAI EP 1991-200687 19910325
DT Utility
FS Granted
EXNAM Primary Examiner: Rories, Charles C. P.
LREP Morrison & Foerster LLP
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 1496
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for the expression of phytase in
transgenic plants or plant organs and methods for the production of such
plants. DNA expression constructs are provided for the transformation of
plants with a gene encoding phytase under the control of regulatory
sequences which are capable of directing the expression of phytase.
These regulatory sequences include sequences capable of directing
transcription in plants, either constitutively, or stage and/or tissue
specific, depending on the use of the plant or parts thereof. The
transgenic plants and plant organs provided by the present invention may
be applied to a variety of industrial processes either directly, e.g. in
animal feeds or alternatively, the expressed phytase may be extracted
and if desired, purified before application.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 26 USPATFULL on STN
AN 1998:1662 USPATFULL
TI Transgenic plants having a modified carbohydrate content
IN Van Ooyen, Albert Johannes Joseph, Voorburg, Netherlands
Rietveld, Krijn, Vlaardingen, Netherlands
Quax, Wilhelmus Johannes, Voorschoten, Netherlands
Van Den Elzen, Petrus Josephus Maria, Voorhout, Netherlands
Pen, Jan, Leiden, Netherlands
Hoekema, Andreas, Oegstgeest, Netherlands
Sijmons, Peter Christiaan, Amsterdam, Netherlands
PA MOGEN International, N.V., Netherlands (non-U.S. corporation)
PI US 5705375 19980106
AI US 1994-253575 19940603 (8)
RLI Continuation of Ser. No. US 1992-849422, filed on 12 Jun 1992, now
abandoned
PRAI EP 1990-202438 19900913
DT Utility
FS Granted
EXNAM Primary Examiner: Rories, Charles C. P.
LREP Morrison & Foerster LLP
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1235
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides plants with a modified taste, solids
content and/or texture. The invention also provides methods of obtaining
such plants via transformation with DNA constructs containing genes
encoding enzymes capable of degrading plant polysaccharides and
optionally additional genes encoding enzymes which are capable of
further modifying the degradation products resulting from the first
degradation step.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 20 OF 26 USPATFULL on STN
 AN 97:3811 USPATFULL
 TI Expression of phytase in plants
 IN Van Ooijen, Albert J. J., Voorburg, Netherlands
 Rietveld, Krijn, Vlaardingen, Netherlands
 Hoekema, Andreas, Oegstgeest, Netherlands
 Pen, Jan, Leiden, Netherlands
 Sijmons, Peter C., Amsterdam, Netherlands
 Verwoerd, Teunis C., Leiden, Netherlands
 PA Mogen International, Leiden, Netherlands (non-U.S. corporation)
 Gist-brocades, B.V., Delft, Netherlands (non-U.S. corporation)
 PI US 5593963 19970114
 AI US 1993-146424 19931102 (8)
 RLI Continuation-in-part of Ser. No. US 1991-756864, filed on 11 Sep 1991,
 now abandoned which is a continuation-in-part of Ser. No. US
 1990-586765, filed on 21 Sep 1990, now abandoned
 PRAI EP 1991-200687 19910325
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Fox, David T.; Assistant Examiner: Rories, Charles C.
 P.
 LREP Morrison & Foerster LLP
 CLMN Number of Claims: 13
 ECL Exemplary Claim: 1
 DRWN 13 Drawing Figure(s); 13 Drawing Page(s)
 LN.CNT 1599

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides for the expression of phytase in
 transgenic plants or plant organs and methods for the production of such
 plants. DNA expression constructs are provided for the transformation of
 plants with a gene encoding phytase under the control of regulatory
 sequences which are capable of directing the expression of phytase.
 These regulatory sequences include sequences capable of directing
 transcription in plants, either constitutively, or stage and/or tissue
 specific, depending on the use of the plant or parts thereof. The
 transgenic plants and plant organs provided by the present invention may
 be applied to a variety of industrial processes either directly, e.g. in
 animal feeds or alternatively, the expressed phytase may be extracted
 and if desired, purified before application.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 21 OF 26 USPATFULL on STN
 AN 97:1347 USPATFULL
 TI Methods of detecting and isolating a ripening form of a polypeptide
 having rhamnogalacturonase activity
 IN Musters, Wouter, Maassluis, Netherlands
 Stam, Hein, Diemen, Netherlands
 Suykerbuyk, Maria E., Utrecht, Netherlands
 Visser, Jacob, Wageningen, Netherlands
 Verbakel, Johannes M., Maasland, Netherlands
 PA Unilever Patent Holdings, B.V., Vlaardingen, Netherlands (non-U.S.
 corporation)
 PI US 5591620 19970107
 AI US 1995-536242 19950929 (8)
 RLI Division of Ser. No. US 1993-61062, filed on 14 May 1993
 PRAI EP 1992-201403 19920515
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny
 Allen
 LREP Cushman Darby & Cushman, L.L.P.
 CLMN Number of Claims: 4
 ECL Exemplary Claim: 1

DRWN 39 Drawing Figure(s); 28 Drawing Page(s)

LN.CNT 2088

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to isolation of an *Aspergillus* gene encoding rhamnogalacturonase (RG-ase) and the construction of recombinant *Aspergillus* strains with overexpression of RG-ase. These strains can be used for the commercial production of RG-ase. RG-ase is an important enzyme in processes requiring the degradation and/or modification of pectin or modification of pectin-containing vegetable or plant cell wall material. RG-ase may be used in various applications, including the processing of fruits and vegetables, in the extraction of components from vegetable material or for improving the functionality of pectin or pectin-containing vegetable material, food material or plant cell wall material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 22 OF 26 USPATFULL on STN

AN 96:77701 USPATFULL

TI Cloning and expression of DNA encoding a ripening form of a polypeptide having rhamnogalacturonase activity

IN Musters, Wouter, Maassluis, Netherlands

Stam, Hein, Diemen, Netherlands

Suykerbuyk, Maria E., Utrecht, Netherlands

Visser, Jacob, Wageningen, Netherlands

Verbakel, Johannes M., Maasland, Netherlands

PA Unilever Patent Holdings, B.V., Vlaardingen, Netherlands (non-U.S. corporation)

PI US 5550045 19960827

AI US 1993-61062 19930514 (8)

PRAI EP 1992-201403 19920515

DT Utility

FS Granted

EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Kim, Hyosuk

LREP Cushman Darby & Cushman, L.L.P.

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN 40 Drawing Figure(s); 28 Drawing Page(s)

LN.CNT 2423

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to isolation of an *Aspergillus* gene encoding rhamnogalacturonase (RG-ase) and the construction of recombinant *Aspergillus* strains with overexpression of RG-ase. These strains can be used for the commercial production of RG-ase. RG-ase is an important enzyme in processes requiring the degradation and/or modification of pectin or modification of pectin-containing vegetable or plant cell wall material. RG-ase may be used in various applications, including the processing of fruits and vegetables, in the extraction of components from vegetable material or for improving the functionality of pectin or pectin-containing vegetable material, food material or plant cell wall material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 23 OF 26 USPAT2 on STN

AN 2003:17924 USPAT2

TI Production of polygalacturonides and their use as food additives

IN Lang, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF

Dornenburg, Heike, Berlin, GERMANY, FEDERAL REPUBLIC OF

PA Technische Universitat Berlin, Berlin, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

PI US 6696554 B2 20040224

WO 2001076609 20011018

AI US 2002-9055 20020225 (10)

WO 2001-EP3998 20010406
PRAI DE 2000-10019076 20000406
DT Utility
FS GRANTED
EXNAM Primary Examiner: Wilson, James O.; Assistant Examiner: Krishnan,
Ganapathy
LREP Rothwell Figg Ernst & Manbeck
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 475

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the use of **polygalacturonides** as
food additives, said **polygalacturonides** being
obtainable via the following process steps:

a) a pectinous plant material is subjected to a pectin extraction in
aqueous solution;

b) the solids are removed from the suspension obtained in step a),
consisting of liquid phase including dissolved pectin and solids from
the plant material;

c) the pectin is precipitated from the liquid phase obtained in step b);

d) the pectin obtained in step c) is dissolved in an aqueous solution
and cleaved with purified endo-**polygalacturonase**;

e) the **polygalacturonides** obtained in step d) are processed
into a **polygalacturonide** preparation without using an
additional separation step and without hydrolyzing ester groups that are
present.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 24 OF 26 WPINDEX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2002-050102 [07] WPINDEX

DNC C2002-014338

TI Preparation of **polygalacturonides**, used as **food**
additives, comprises extraction of pectin, separation and precipitation,
then contacting with endo-galacturonase, to form **polygalacturonide**
without separation/hydrolysis of ester groups.

DC A97 D13 D16

IN DOERNENBURG, H; LANG, C P; LANG, C; DORNENBURG, H

PA (LANG-I) LANG C; (DORN-I) DORNENBURG H; (UYBE-N) UNIV BERLIN TECH

CYC 95

PI DE 10019076 A1 20011018 (200207)* 5

WO 2001076609 A1 20011018 (200207) GE

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001054791 A 20011023 (200213)

EP 1191936 A1 20020403 (200230) GE

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

US 2003013678 A1 20030116 (200308)

JP 2003530096 W 20031014 (200368) 18

US 6696554 B2 20040224 (200415)

US 2004146635 A1 20040729 (200450)

ADT DE 10019076 A1 DE 2000-10019076 20000406; WO 2001076609 A1 WO 2001-EP3998
20010406; AU 2001054791 A AU 2001-54791 20010406; EP 1191936 A1 EP
2001-927891 20010406; WO 2001-EP3998 20010406; US 2003013678 A1 WO

2001-EP3998 20010406, US 2002-9055 20020225; JP 2003530096 W JP
 2001-574125 20010406, WO 2001-EP3998 20010406; US 6696554 B2 WO
 2001-EP3998 20010406, US 2002-9055 20020225; US 2004146635 A1 Div ex WO
 2001-EP3998 20010406, Div ex US 2002-9055 20020225, US 2004-759294
 20040120
 FDT AU 2001054791 A Based on WO 2001076609; EP 1191936 A1 Based on WO
 2001076609; JP 2003530096 W Based on WO 2001076609; US 6696554 B2 Based on
 WO 2001076609; US 2004146635 A1 Div ex US 6696554
 PRAI DE 2000-10019076 20000406
 AN 2002-050102 [07] WPINDEX
 AB DE 10019076 A UPAB: 20020130

NOVELTY - Preparation of **polygalacturonides** (I), comprises the
 steps of: extraction of pectin from plant material; separation of solids
 from the suspension; precipitation of pectin from the liquid phase;
 contacting the pectin with aqueous solution and mixing with
 endo-galacturonase; and converting to a **polygalacturonide**
 preparation without further separation or hydrolysis of the ester groups.

DETAILED DESCRIPTION - The **polygalacturonides** are obtained
 by:

- (a) extracting pectin from plant material in aqueous solution;
- (b) separating the solids from the resultant suspension in a liquid
 phase (II) containing dissolved pectin (III);
- (c) precipitating the dissolved pectin from the liquid phase;
- (d) bringing the dissolved pectin into aqueous solution and mixing
 with purified endo-galacturonase; and
- (e) conversion to a **polygalacturonide** preparation, without
 further separation or hydrolysis of the ester groups present.

USE - The **polygalacturonides** (I) are used as **food**
 additives (claimed), e.g. in **baby food**, canned and
 bottled **foods**, **drinks**, confectionery, baked goods,
 chips etc.

ADVANTAGE - The present additive improves the flavor and (optionally)
 the consistency and/or other properties of **food**. As endo-
polygalacturonase only cuts the bonds of bonds of naturally
 unesterified galacturonic acid and the ester groups are not hydrolyzed,
 most of the **polygalacturonides** have 5-20 monomer units. The
 mixtures of mainly saturated oligosaccharides with side chains increase
 the immune response and also act as ballast, making them useful in
 prophylaxis and therapy of many diseases, e.g. constipation,
 diverticulosis, colon cancers, diabetes mellitus and lipid exchange
 problems. They reduce binding of essential nutrients, which is a
 disadvantage of commercially-available ballast substances.
 Dwg.0/0

L4 ANSWER 25 OF 26 WPINDEX COPYRIGHT 2004 THOMSON DERWENT on STN
 AN 2000-400032 [34] WPINDEX
 DNC C2000-120824
 TI Continuous recovery of active proteins from vegetable material or
 fermentation medium, by continuous precipitation with organic solvent from
 an enzymatic extract solution.
 DC D13 D16 D21
 IN CRELIER, S; DAURY, M C; JUILLERAT, M A; WARNERY, P
 PA (NEST) SOC PROD NESTLE SA; (CREL-I) CRELIER S; (DAUR-I) DAURY M C;
 (JUILL-I) JUILLERAT M A; (WARN-I) WARNERY P
 CYC 29
 PI WO 2000031116 A1 20000602 (200034)* FR 24
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: AU BR CA CN JP MX NO NZ US ZA
 AU 2000015055 A 20000613 (200043)
 BR 9915484 A 20010731 (200146)
 EP 1131339 A1 20010912 (200155) FR
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 US 2002018831 A1 20020214 (200214)
 CN 1326463 A 20011212 (200225)
 MX 2001005082 A1 20010701 (200236)

JP 2002530427 W 20020917 (200276) 26
 ZA 2001005015 A 20021030 (200282) 37
 ADT WO 2000031116 A1 WO 1999-EP8699 19991110; AU 2000015055 A AU 2000-15055
 19991110; BR 9915484 A BR 1999-15484 19991110, WO 1999-EP8699 19991110; EP
 1131339 A1 EP 1999-957301 19991110, WO 1999-EP8699 19991110; US 2002018831
 A1 Cont of WO 1999-EP8699 19991110, US 2001-859315 20010517; CN 1326463 A
 CN 1999-813509 19991110; MX 2001005082 A1 MX 2001-5082 20010518; JP
 2002530427 W WO 1999-EP8699 19991110, JP 2000-583943 19991110; ZA
 2001005015 A ZA 2001-5015 20010619
 FDT AU 2000015055 A Based on WO 2000031116; BR 9915484 A Based on WO
 2000031116; EP 1131339 A1 Based on WO 2000031116; JP 2002530427 W Based on
 WO 2000031116
 PRAI EP 1998-203876 19981120
 AN 2000-400032 [34] WPINDEX
 AB WO 200031116 A UPAB: 20000718
 NOVELTY - Continuous recovery of active proteins from vegetable material
 or a fermentation medium by continuous precipitation with organic solvent
 from an enzymatic extract solution.
 DETAILED DESCRIPTION - Process for isolating active proteins from
 vegetable material or fermentation mediums comprises precipitating, in a
 suitable organic solvent, the active proteins contained in an enzymatic
 solution extracted from the vegetable material/fermentation medium,
 continuously and in a single step in a specific reactor, the conditions in
 the reactor being controlled so as to obtain a precipitate of
 non-denatured protein, and then continuously separating the protein.
 USE - The products are useful for the preparation of cosmetics and
 food products, especially for regenerating the flavor and aroma of
 vegetable based foods such as soups, baby
 foods, cooked dishes or pork products.
 ADVANTAGE - The process is simple to carry out and allows isolation
 of active endogenous enzymes from vegetable sources which can restore the
 fresh taste of processed foods in which the aroma- and
 flavor-generating enzymes have been inactivated.
 Dwg.0/0

L4 ANSWER 26 OF 26 WPINDEX COPYRIGHT 2004 THOMSON DERWENT on STN
 AN 1999-471369 [40] WPINDEX
 DNC C1999-138461
 TI New polygalacturonase prepared by expressing genes from
 Saccharomyces cerevisiae in micro-organisms, used to degrade pectin, e.g.
 for clarifying fruit juice.
 DC D13 D16 F01 F06 F09
 IN BELARBI, A; GAINVORS, A; GOGNIES, S
 PA (PASC-N) PASCAL BIOTECH SARL; (UYRE-N) UNIV REIMS CHAMPAGNE-ARDENNE
 CYC 1
 PI FR 2774999 A1 19990820 (199940)* 25
 ADT FR 2774999 A1 FR 1998-1975 19980218
 PRAI FR 1998-1975 19980218
 AN 1999-471369 [40] WPINDEX
 AB FR 2774999 A UPAB: 19991004
 NOVELTY - A new polygalacturonase (I) is prepared by expressing
 a 1083 bp gene (2, sequence reproduced), introduced by genetic engineering
 into the genome of a micro-organism.
 DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
 following:
 (a) a recombinant plasmid containing (2);
 (b) strains of yeast, particularly Saccharomyces cerevisiae that have
 (2) inserted into their genomes and are able to express (I); and
 (c) the recombinant production of (I) by culturing cells of (b) on a
 standard medium and recovering product from the supernatant.
 USE - (I), a pectinolytic enzyme, is used (claimed):
 (1) to clarify fruit juices and musts that contain pectin (also to
 reduce their viscosity and improve juice yields); and
 (2) in food processing, e.g. in the preparation of
 baby foods (to improve digestibility), to increase

extraction of oils (including essential oils for perfumery) and for depulping coffee beans.

Other uses (not claimed) are in the retting of textile materials (flax and hemp) and to treat wood to improve the penetration of preservative and coloring compositions.

ADVANTAGE - (I) can now be produced free of unwanted enzymes, particularly oxido-reductases (as produced by *Aspergillus niger*, the current source of pectinolytic enzymes).

Dwg.0/2

=> dis hist

(FILE 'HOME' ENTERED AT 12:47:19 ON 02 SEP 2004)

FILE 'APOLLIT, BABS, CAPLUS, CBNB, CEN, CIN, DISSABS, EMA, IFIPAT, JICST-EPLUS, PASCAL, PLASNEWS, PROMT, RAPRA, SCISEARCH, TEXTILETECH, USPATFULL, USPAT2, WPIFV, WPINDEX, WTEXTILES' ENTERED AT 12:47:33 ON 02 SEP 2004

L1 14794 S POLYGALACTURON?
L2 5250 S L1 AND (FOOD OR DRINK OR COMPOSITION OR NUTRACEUTICAL)
L3 268 S L2 AND TASTE
L4 26 S L2 AND (BABY(W)FOOD)

=> s plygalacturonide

L5 0 POLYGALACTURONIDE

=> s polygalacturonide

L6 166 POLYGALACTURONIDE

=> s l6 and (food or drink or beverage or nutraceutical)

L7 43 L6 AND (FOOD OR DRINK OR BEVERAGE OR NUTRACEUTICAL)

=> dis l7 1-43 bib abs

L7 ANSWER 1 OF 43 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:762832 CAPLUS
DN 135:287879
TI Production of **polygalacturonides** and their use as **food**
additives
IN Lang, Christine; Doernenburg, Heike
PA Germany
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001076609	A1	20011018	WO 2001-EP3998	20010406
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 10019076	A1	20011018	DE 2000-10019076	20000406
	AU 2001054791	A5	20011023	AU 2001-54791	20010406
	EP 1191936	A1	20020403	EP 2001-927891	20010406
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2003530096	T2	20031014	JP 2001-574125	20010406

US 2003013678	A1	20030116	US 2002-9055	20020225
US 6696554	B2	20040224		
US 2004146635	A1	20040729	US 2004-759294	20040120
PRAI DE 2000-10019076	A	20000406		
WO 2001-EP3998	W	20010406		
US 2002-9055	A3	20020225		

AB The invention relates to the use of **polygalacturonides** as food additives. Said **polygalacturonides** can be obtained by carrying out the following steps: a) subjecting plant material containing pectin to a pectin extraction process in aqueous solution; b) separating the solids from the suspension of the liquid phase with the dissolved pectin and the plant material solids obtained in step a); c) precipitating pectin from the liquid phase obtained in step b); d) introducing the pectin obtained in step c) into an aqueous solution and cutting the same with purified endo-polygalacturonase; e) processing the **polygalacturonides** obtained in step d) into a **polygalacturonide** preparation without any further separation step and without hydrolysis of ester groups present.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 43 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:251232 CAPLUS

DN 130:281115

TI Characterization of some maceration enzymes

AU Parodi, Guido; Silva, Angela

CS Italy

SO Vignevini (1999), 26(3), 61-64

CODEN: VIGNDL; ISSN: 0390-0479

PB Edagricole SpA

DT Journal

LA Italian

AB Four com. enzyme preps. for use in grape vinification were studied. The preps. had declared hydrolytic activities on proteins, pectins, methylpectins, cellulose, hemicellulose, **polygalacturonides**, etc. The preps. were analyzed for protein content and activities of polygalacturonase, methylpectin esterase, and aryl (chlorogenic acid) esterase. The practical use was tested with macerated red grapes. The enzyme preps. are generally beneficial for wine production Since they are usually crude mixts. with several enzymic activities, their use has to be monitored for possible adverse effects.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 43 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:134026 CAPLUS

DN 110:134026

TI Methoxylated poly(α -1,4-D-galacturonide)-based gel and their manufacture

IN Misaki, Akira; Komae, Kozo; Otsu, Keiji

PA Dainippon Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63209553	A2	19880831	JP 1987-46487	19870227
	JP 06059175	B4	19940810		
PRAI	JP 1987-46487		19870227		

AB Uniform gel with good strength, useful in **foods**, enzyme immobilization, etc., are manufactured by treating pectic substances containing mainly highly-methoxylated linear poly(α -1,4-D-galacturonide) (I)

with pectin Me esterase in the presence of polyvalent metal ions. Thus, seeds of *Ficus awkeotsang* Makino was heated and extracted with H₂O to give pectin containing 85%-methoxylated I, whose solution in phosphate buffer was mixed with CaCl₂·2H₂O, then treated with pectin Me esterase from lemon at 25° to give a gel with breaking strength 2.39 + 104 dyne/cm².

L7 ANSWER 4 OF 43 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1943:5546 CAPLUS

DN 37:5546

OREF 37:965e-i,966a

TI Low-sugar jellying pectinates

AU Hills, Claude H.; White, Jonathan W., Jr.; Baker, Geo. L.

SO Proc. Inst. Food Tech. (1942) 47-58

DT Journal

LA Unavailable

AB cf. C. A. 36, 6259.9. The formation of a stable gel with ordinary pectin requires the use of approx. 65% sugar plus a small amount of acid. Pectinate gels require neither sugar nor acid, but gelation is brought about by the addition of Ca or other multivalent cations. Sugar and acid may be incorporated into the gel formula to improve the flavor, without materially affecting the properties of the gel. Thus the quantity of sugar used in making fruit gels with pectinates may be much less than 65% and still produce a very satisfactory product. Pectinates can be produced in 2 ways: (1) acid-demethylation, and (2) enzyme-demethylation. The former consists in treating the pectic material with strong acid at temps. of 50° or below for 1 to 2 days. The key to successful demethylation lies in the selection of conditions of acidity, temperature and time which cause the min. degradation of the **polygalacturonide** chain. Acid-demethylation can be applied at various stages in the usual processes of pectin manufacture, i. e., the fruit pomace, the pectin extract or the precipitated pectin itself. The enzyme method utilizes pectase enzyme, a convenient source of which is raw tomato juice. The best stage at which to demethylate pectin with enzyme is immediately after the pectin extract has been filtered. In order to realize the full activity of the enzyme it is necessary to add oxalic acid in an amount equal to 0.1% of the weight of the extract. It is further necessary to adjust the pH value of the extract to about 6.0 and maintain it at this level throughout the reaction. Approx. 1 quart of tomato juice (filtered) is sufficient to demethylate 50 gals. of 0.6% pectin extract in 1 hr. at 50°. Practical applications of the use of these pectinate gels in the food industries are pointed out. The addition of a small quantity of Ca pectinate to a sugar sirup greatly increases the viscosity of the product. Low-ester pectinates offer means of preparing processed fruit and vegetable salads and fruit desserts. They can be used in acid products where gelatin would break down. They have not been successfully used to improve the moisture retention of cream cheese owing to the sensitivity of pectinates to the Ca in the cheese whey. They are of particular advantage in preventing leakage in frozen fruits such as strawberries and raspberries. Pectinates can likewise be used in pharmaceutical prepns. where a trace of Ca is not objectionable. Another possibility is in the preparation of new nutrient bacteriol. culture media. Cf. C. A. 35, 3730.5.

L7 ANSWER 5 OF 43 IFIPAT COPYRIGHT 2004 IFI on STN

AN 10639407 IFIPAT;IFIUDB;IFICDB

TI PRODUCTION OF **POLYGALACTURONIDES** AND THEIR USE IN **FOOD** ADDITIVES

INF Dornenburg; Heike, Berlin, DE

Lang; Christine, Berlin, DE

IN Dornenburg Heike (DE); Lang Christine (DE)

PAF Technische Universitat Berlin, Berlin, 10623, DE

PA Technische Universitat Berlin DE (7919)

AG ROTHWELL, FIGG, ERNST & MANBECK, P.C., 1425 K STREET, N.W., SUITE 800, WASHINGTON, DC, 20005, US

PI US 2004146635 A1 20040729

AI US 2004-759294 20040120

RLI US 2002-9055 20020225 DIVISION 6696554
PRAI DE 2000-100190766 20000406
FI US 2004146635 20040729
US 6696554

DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION

CLMN 7

AB The invention relates to the use of **polygalacturonides** as **food** additives, said **polygalacturonides** being obtainable via the following process steps: a) a pectinous plant material is subjected to a pectin extraction in aqueous solution; b) the solids are removed from the suspension obtained in step a) , consisting of liquid phase including dissolved pectin and solids from the plant material; c) the pectin is precipitated from the liquid phase obtained in step b); d) the pectin obtained in step c) is dissolved in an aqueous solution and cleaved with purified endo-polygalacturonase; e) the **polygalacturonides** obtained in step d) are processed into a **polygalacturonide** preparation without using an additional separation step and without hydrolyzing ester groups that are present.

CLMN 7

L7 ANSWER 6 OF 43 IFIPAT COPYRIGHT 2004 IFI on STN

AN 10269276 IFIPAT;IFIUDB;IFICDB

TI PRODUCTION OF **POLYGALACTURONIDES** AND THEIR USE AS **FOOD**
ADDITIVES; AQUEOUS SOLUTION EXTRACTION FROM PECTIN

INF Dornenburg; Heike, Berlin, DE

Lang; Christine, Berlin, DE

IN Dornenburg Heike (DE); Lang Christine (DE)

PAF Unassigned

PA Unassigned Or Assigned To Individual (68000)

PPA Technische Universitat Berlin DE (Probable)

AG BRUCE LONDA NORRIS, MCLAUGHLIN & MARCUS, P.A., 220 EAST 42ND STREET, 30TH
FLOOR, NEW YORK, NY, 10017, US

PI US 2003013678 A1 20030116

AI US 2002-9055 20020225

WO 2001-EP3998 20010406

PRAI DE 2000-10019076 20000406

FI US 2003013678 20030116

US 6696554 20040224

DT Utility; Patent Application - First Publication

FS CHEMICAL
APPLICATION

CLMN 7

AB The invention relates to the use of **polygalacturonides** as **food** additives, said **polygalacturonides** being obtainable via the following process steps: a) a pectinous plant material is subjected to a pectin extraction in aqueous solution; b) the solids are removed from the suspension obtained in step a) , consisting of liquid phase including dissolved pectin and solids from the plant material; c) the pectin is precipitated from the liquid phase obtained in step b); d) the pectin obtained in step c) is dissolved in an aqueous solution and cleaved with purified endo-polygalacturonase; e) the **polygalacturonides** obtained in step d) are processed into a **polygalacturonide** preparation without using an additional separation step and without hydrolyzing ester groups that are present.

CLMN 7

L7 ANSWER 7 OF 43 IFIPAT COPYRIGHT 2004 IFI on STN

AN 04024333 IFIPAT;IFIUDB;IFICDB

TI PRODUCTION OF **POLYGALACTURONIDES** AND THEIR USE AS **FOOD**
ADDITIVES; AQUEOUS SOLUTION EXTRACTION FROM PECTIN

INF Dornenburg; Heike, Berlin, DE

Lang; Christine, Berlin, DE

IN Dornenburg Heike (DE); Lang Christine (DE)

PAF Technische Universitat Berlin, Berlin, DE
PA Technische Universitat Berlin DE (7919)
EXNAM Wilson, James O
EXNAM Krishnan, Ganapathy
AG Rothwell Figg Ernst & Manbeck
PI US 6696554 B2 20040224
US 2003013678 A1 20030116
WO 2001076609 20011018
AI US 2002-9055 20020225
WO 2001-EP3998 20010406
20020225 PCT 371 date
20020225 PCT 102(e) date
PRAI DE 2000-10019076 20000406
FI US 6696554 20040224
US 2003013678 20030116
DT Utility; Granted Patent - Utility, with Pre-Grant Publication
FS CHEMICAL
GRANTED
NTE INDEXED FROM APPLICATION
Subject to any Disclaimer, the term of this patent is extended or
adjusted under 35 USC 154(b) by 3 days.
MRN 012695 MFN: 0788
CLMN 31
AB The invention relates to the use of **polygalacturonides** as
food additives, said **polygalacturonides** being
obtainable via the following process steps: a) a pectinous plant material
is subjected to a pectin extraction in aqueous solution; b) the solids
are removed from the suspension obtained in step a) , consisting of
liquid phase including dissolved pectin and solids from the plant
material; c) the pectin is precipitated from the liquid phase obtained in
step b); d) the pectin obtained in step c) is dissolved in an aqueous
solution and cleaved with purified endo-polygalacturonase; e) the
polygalacturonides obtained in step d) are processed into a
polygalacturonide preparation without using an additional
separation step and without hydrolyzing ester groups that are present.
NTE INDEXED FROM APPLICATION
Subject to any Disclaimer, the term of this patent is extended or
adjusted under 35 USC 154(b) by 3 days.
CLMN 31
L7 ANSWER 8 OF 43 JICST-EPlus COPYRIGHT 2004 JST on STN
AN 900584429 JICST-EPlus
TI A 4,5-unsaturated low molecular oligogalacturonide as a potent
phytoalexin-elicitor isolated from **polygalacturonide** of Ficus
awkeotsang.
AU KOMAE K; KOMAE A; MISAKI A
CS Osaka City Univ., Osaka, JPN
SO Agric Biol Chem, (1990) vol. 54, no. 6, pp. 1477-1484. Journal Code:
G0021A (Fig. 5, Tbl. 2, Ref. 24)
CODEN: ABCHA6; ISSN: 0002-1369
CY Japan
DT Journal; Article
LA English
STA New
AB A highly methyl esterified linear A-(1.RAR.4)-linked
polygalacturonide, isolated from a water extract of seeds of Ficus
awkeotsang Makino, was used for the study of elicitor-active
oligosaccharides on host-parasite interactions in higher plants.
Oligogalacturonides (OLGAs), obtained from awkeotsang
polygalacturonide or low methyl esterified apple pectin by
treatment with the purified endo-pectate lyase (EC 4.2.2.2) of Erwinia
carotovora, were found to induce glyceollin accumulation in soybean
cotyledons. The de-esterified awkeotsang-OLGAs was precisely fractionated
by anion-exchange chromatography using a QAE-Sephadex A-25 column, and was
assayed for the elicitor activity. Among the purified oligogalacturonides

with DP 3 to 12, it was found that 4,5-unsaturated hexa-A-1,4-galacturonide of the low molecular elicitor-active oligogalacturonides (DP 5 to 7) also was a potent elicitor as well as the 4,5-unsaturated deca-A-1,4-galacturonide of the high molecular elicitor-active oligogalacturonides (DP 9 to 11) previously reported by Davis et al. (author abst.)

L7 ANSWER 9 OF 43 JICST-EPlus COPYRIGHT 2004 JST on STN

AN 890413197 JICST-EPlus

TI Isolation and characterization of the gel-forming
polygalacturonide from seeds of *Ficus awkeotsang*.

AU KOMAE K; MISAKI A

CS Osaka City Univ., Osaka, JPN

SO Agric Biol Chem, (1989) vol. 53, no. 5, pp. 1237-1245. Journal Code:

G0021A (Fig. 5, Tbl. 2, Ref. 17)

CODEN: ABCHA6; ISSN: 0002-1369

CY Japan

DT Journal; Article

LA English

STA New

AB To examine the spontaneous gel-forming property of the polysaccharide of seeds of *Ficus awkeotsang* Makino, seeds were extracted sequentially with cold and hot water, and then aqueous ammonium oxalate. The major acidic polysaccharide (CA!D25+239.DEG.; DE 63.6%; M.W. 3.4×10^5), which was responsible for gel-formation, was obtained from the surface of heat-treated seeds and found to be composed mainly of galacturonic acid (96%). On fractionation of the major acidic polysaccharide by anion-exchange column chromatography, three kinds of methyl esterified components were obtained (P-1, DE=69.3%; P-2, 49.2% and P-3, 22.8%). Methylation analysis of the carboxyl-reduced polysaccharide indicated that the acidic polysaccharide is an essentially linear polysaccharide containing A-(1.4)-linked D-galacturonic acid residues and devoid of L-rhamnose residues, which confirmed it to be a **polygalacturonide**. Comparison of the IR spectra and the degrees of methyl esterification of the **polygalacturonide** extracted from heat-treated and heat-untreated seeds suggested that the methylester groups in the **polygalacturonide** must have been released during the seed extraction at room temperature. As a model test, furthermore, when the acid polysaccharide prepared from heat-treated seeds was incubated with pectinesterase from lemon peel in the presence of 1mM $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$, the gel-forming behavior observed was closely similar to the spontaneous gel-formation of the *awkeotsang* extract. These results may support the possibility that the high amount of calcium ions (4.0-5.6%) in an aqueous extract of the seeds contributes to the "egg-box" formation, by being placed between the de-esterified structurally regular **polygalacturonide** chains. (author abst.)

L7 ANSWER 10 OF 43 USPATFULL on STN

AN 2004:189867 USPATFULL

TI Production of **polygalacturonides** and their use in food
additives

IN Lang, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF
Dornenburg, Heike, Berlin, GERMANY, FEDERAL REPUBLIC OF

PA Technische Universitat Berlin, Berlin, GERMANY, FEDERAL REPUBLIC OF,
10623 (non-U.S. corporation)

PI US 2004146635 A1 20040729

AI US 2004-759294 A1 20040120 (10)

RLI Division of Ser. No. US 2002-9055, filed on 25 Feb 2002, GRANTED, Pat.
No. US 6696554 A 371 of International Ser. No. WO 2001-EP3998, filed on
6 Apr 2001, UNKNOWN

PRAI DE 2000-10019076 20000406

DT Utility

FS APPLICATION

LREP ROTHWELL, FIGG, ERNST & MANBECK, P.C., 1425 K STREET, N.W., SUITE 800,
WASHINGTON, DC, 20005

CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 407

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the use of **polygalacturonides** as food additives, said **polygalacturonides** being obtainable via the following process steps:

- a) a pectinous plant material is subjected to a pectin extraction in aqueous solution;
- b) the solids are removed from the suspension obtained in step a), consisting of liquid phase including dissolved pectin and solids from the plant material;
- c) the pectin is precipitated from the liquid phase obtained in step b);
- d) the pectin obtained in step c) is dissolved in an aqueous solution and cleaved with purified endo-polygalacturonase;
- e) the **polygalacturonides** obtained in step d) are processed into a **polygalacturonide** preparation without using an additional separation step and without hydrolyzing ester groups that are present.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 11 OF 43 USPATFULL on STN
AN 2004:88602 USPATFULL
TI Pectate lyases
IN Andersen, Lene Nonboe, Allerod, DENMARK
Schulein, Martin, Copenhagen, DENMARK
Dela, Hanne, Copenhagen, DENMARK LR
Lange, Niels Erik Krebs, Raleigh, NC, UNITED STATES
Bjornvad, Mads Eskelund, Frederiksberg, DENMARK
Moller, Soren, Holte, DENMARK
Glad, Sanne O Schroder, Ballerup, DENMARK
Kauppinen, Markus Sakari, Copenhagen N, DENMARK
Schnorr, Kirk, Copenhagen N, DENMARK
Kongsbak, Lars, Holte, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK, DK-2880 (non-U.S. corporation)
PI US 2004067572 A1 20040408
AI US 2003-655433 A1 20030904 (10)
RLI Continuation of Ser. No. US 2002-72152, filed on 7 Feb 2002, GRANTED,
Pat. No. US 6677147 Continuation of Ser. No. US 2000-694531, filed on 23
Oct 2000, GRANTED, Pat. No. US 6368843 Continuation of Ser. No. US
1998-198955, filed on 24 Nov 1998, GRANTED, Pat. No. US 6187580
Continuation-in-part of Ser. No. US 1998-73684, filed on 6 May 1998,
GRANTED, Pat. No. US 6124127 Continuation-in-part of Ser. No. US
1998-184217, filed on 2 Nov 1998, GRANTED, Pat. No. US 6258590
PRAI DK 1997-1343 19971124
DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
US 1997-67249P 19971202 (60)
DT Utility
FS APPLICATION
LREP NOVOZYMES NORTH AMERICA, INC., 500 FIFTH AVENUE, SUITE 1600, NEW YORK,
NY, 10110
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 3586

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to pectate lyases comprising the amino

acid sequence Asn Leu Asn Ser Arg Val Pro (NLNSRVP) (SEQ ID NO: 2) belonging to Family 1 of polysaccharide lyases have good performance in industrial processes under neutral or alkaline conditions such as laundering and textile processing. The pectate lyase may be derivable from Bacillus species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 12 OF 43 USPATFULL on STN
AN 2003:251154 USPATFULL
TI Cell-wall degrading enzyme variants
IN Schroder Glad, Sanne O., Ballerup, DENMARK
Andersen, Carsten, Vaerloose, DENMARK
Schulein, Martin, Copenhagen, DENMARK
Dela, Hanne, Copenhagen, DENMARK LR
Peter, Torben, Frandsen, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PI US 2003175940 A1 20030918
AI US 2003-403192 A1 20030331 (10)
RLI Division of Ser. No. US 2001-910505, filed on 19 Jul 2001, PENDING
PRAI DK 2000-1117 20000719
DK 2001-705 20010504
DK 2001-734 20010510
US 2001-290724P 20010514 (60)
DT Utility
FS APPLICATION
LREP NOVOZYMES NORTH AMERICA, INC., 500 FIFTH AVENUE, SUITE 1600, NEW YORK, NY, 10110
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 2791

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to variants of a cell-wall degrading enzyme having a beta-helix structure, which variant has at least one substituent in a position determined by identifying all residues potentially belonging to a stack; characterizing the stack as interior or exterior; characterizing the stack as polar, hydrophobic or aromatic/heteroaromatic based on the dominating characteristics of the parent or wild-type enzyme stack residues and/or its orientation relative to the beta-helix (interior or exterior); optimizing all stack positions of a stack either to hydrophobic aliphatic amino acids, hydrophobic aromatic or polar amino acids by allowing mutations within one or all positions to amino acids belonging to one of these groups; measuring thermostability of the variants by DSC or an application-related assay such as a Pad-Steam application test; and selecting the stabilized variants. Variant of a wild-type parent pectate lyase (EC 4.2.2.2) having the conserved amino acid residues D111, D141 or E141, D145, K165, R194 and R199 when aligned with the pectate lyase comprising the amino acid sequence of SEQ ID NO: 2 are preferred.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 13 OF 43 USPATFULL on STN
AN 2003:37230 USPATFULL
TI Encapsulation compositions
IN Porzio, Michael A., Monkton, MD, UNITED STATES
Popplewell, Lewis M., Cockeysville, MD, UNITED STATES
PA MCCORMICK & COMPANY, INC., Sparks, MD, UNITED STATES (U.S. corporation)
PI US 2003026874 A1 20030206
US 6652895 B2 20031125
AI US 2002-142882 A1 20020513 (10)
RLI Division of Ser. No. US 2000-709529, filed on 13 Nov 2000, GRANTED, Pat. No. US 6416799 Division of Ser. No. US 1999-299733, filed on 27 Apr 1999, GRANTED, Pat. No. US 6187351 Division of Ser. No. US 1996-763148,

filed on 10 Dec 1996, GRANTED, Pat. No. US 5897897 Division of Ser. No. US 1995-424572, filed on 17 Apr 1995, GRANTED, Pat. No. US 5603971
Continuation of Ser. No. US 1993-98885, filed on 29 Jul 1993, ABANDONED
Continuation-in-part of Ser. No. US 1993-47196, filed on 16 Apr 1993, ABANDONED

DT Utility
FS APPLICATION
LREP OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755
JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 1300

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Carbohydrate-based glassy matrices which are stable in the glassy state at ambient temperatures may be prepared by the use of aqueous plasticizers with melt extrusion. Such glassy matrices are useful for the encapsulation of encapsulates, in particular, flavoring agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 14 OF 43 USPATFULL on STN
AN 2003:23735 USPATFULL
TI Cell-wall degrading enzyme variants
IN Schroder Glad, Sanne O., Ballerup, DENMARK
Andersen, Carsten, Vaerloese, DENMARK
Schulein, Martin, Copenhagen, DENMARK
Dela, Hanne, Copenhagen, DENMARK LR
Frandsen, Torben Peter, Frederiksberg, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK
PI US 2003017575 A1 20030123
US 6607902 B2 20030819
AI US 2001-910505 A1 20010719 (9)
PRAI DK 2000-1117 20000719
DK 2001-705 20010504
DK 2001-734 20010510
US 2001-290724P 20010514 (60)

DT Utility
FS APPLICATION
LREP NOVOZYMES NORTH AMERICA, INC., C/O NOVO NORDISK OF NORTH AMERICA, INC.,
405 LEXINGTON AVENUE, SUITE 6400, NEW YORK, NY, 10174
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 2595

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A variant of a cell-wall degrading enzyme having a beta-helix structure, which variant holds at least one substituent in a position determined by identifying all residues potentially belonging to a stack; characterizing the stack as interior or exterior; characterizing the stack as polar, hydrophobic or aromatic/heteroaromatic based on the dominating characteristics of the parent or wild-type enzyme stack residues and/or its orientation relative to the beta-helix (interior or exterior); optimizing all stack positions of a stack either to hydrophobic aliphatic amino acids, hydrophobic aromatic or polar amino acids by allowing mutations within one or all positions to amino acids belonging to one of these groups; measuring thermostability of the variants by DSC or an application-related assay such as a Pad-Steam application test; and selecting the stabilized variants. Variant of a wild-type parent pectate lyase (EC 4.2.2.2) having the conserved amino acid residues D111, D141 or E141, D145, K165, R194 and R199 when aligned with the pectate lyase comprising the amino acid sequence of SEQ ID NO: 2 are preferred.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 15 OF 43 USPATFULL on STN
AN 2003:17924 USPATFULL
TI Production of **polygalacturonides** and their use as food
additives
IN Lang, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF
Dornenburg, Heike, Berlin, GERMANY, FEDERAL REPUBLIC OF
PI US 2003013678 A1 20030116
US 6696554 B2 20040224
AI US 2002-9055 A1 20020225 (10)
WO 2001-EP3998 20010406
PRAI DE 2000-10019076 20000406
DT Utility
FS APPLICATION
LREP BRUCE LONDA, NORRIS, MCLAUGHLIN & MARCUS, P.A., 220 EAST 42ND STREET,
30TH FLOOR, NEW YORK, NY, 10017
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the use of **polygalacturonides** as
food additives, said **polygalacturonides** being
obtainable via the following process steps:

a) a pectinous plant material is subjected to a pectin extraction in
aqueous solution;

b) the solids are removed from the suspension obtained in step a),
consisting of liquid phase including dissolved pectin and solids from
the plant material;

c) the pectin is precipitated from the liquid phase obtained in step b);

d) the pectin obtained in step c) is dissolved in an aqueous solution
and cleaved with purified endo-polygalacturonase;

e) the **polygalacturonides** obtained in step d) are processed
into a **polygalacturonide** preparation without using an
additional separation step and without hydrolyzing ester groups that are
present.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 16 OF 43 USPATFULL on STN
AN 2002:258868 USPATFULL
TI Novel pectate Lyases
IN Andersen, Lene Nonboe, Allerod, DENMARK
Schulein, Martin, Copenhagen, DENMARK
Dela, Hanne, Copenhagen, DENMARK LR
Lange, Niels Erik Krebs, Raleigh, NC, UNITED STATES
Bjornvad, Mads Eskelund, Frederiksberg, DENMARK
Moller, Soren, Holte, DENMARK
Glad, Sanne O. Schroder, Ballerup, DENMARK
Kauppinen, Markus Sakari, Copenhagen N, DENMARK
Schnorr, Kirk, Copenhagen N, DENMARK
Kongsbak, Lars, Holte, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PI US 2002142438 A1 20021003
US 6677147 B2 20040113
AI US 2002-72152 A1 20020207 (10)
RLI Continuation of Ser. No. US 2000-694531, filed on 23 Oct 2000, PATENTED
Continuation of Ser. No. US 1998-198955, filed on 24 Nov 1998, PATENTED
Continuation-in-part of Ser. No. US 1998-73684, filed on 6 May 1998,
PATENTED Continuation-in-part of Ser. No. US 1998-184217, filed on 2 Nov

1998, PATENTED
PRAI DK 1997-1343 19971124
DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
US 1997-67249P 19971202 (60)
DT Utility
FS APPLICATION
LREP NOVOZYMES NORTH AMERICA, INC., C/O NOVO NORDISK OF NORTH AMERICA, INC.,
405 LEXINGTON AVENUE, SUITE 6400, NEW YORK, NY, 10174
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 3591

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to pectate lyases comprising the amino acid sequence Asn Leu Asn Ser Arg Val Pro (NLNSRVVP) (SEQ ID NO: 2) belonging to Family 1 of polysaccharide lyases have good performance in industrial processes under neutral or alkaline conditions such as laundering and textile processing. The pectate lyase may be derivable from Bacillus species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 17 OF 43 USPATFULL on STN
AN 2002:194732 USPATFULL
TI Pectin degrading enzymes from Bacillus licheniformis
IN Andersen, Lene Nonboe, Aller.o slashed.d, DENMARK
Schulein, Martin, Copenhagen, DENMARK
Lange, Niels Erik Krebs, Raleigh, DENMARK
Bj.o slashed.rnvad, Mads Eskelund, Frederiksberg, DENMARK
Schnorr, Kirk, Copenhagen, DENMARK
PA Novozymes A/S, Begsvaard, DENMARK (non-U.S. corporation)
PI US 6429000 B1 20020806
AI US 2000-670141 20000926 (9)
RLI Continuation of Ser. No. US 1998-198956, filed on 24 Nov 1998, now patented, Pat. No. US 6165769 Continuation-in-part of Ser. No. US 1998-73684, filed on 6 May 1998, now patented, Pat. No. US 6124127
PRAI DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Lambiris, Elias
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 2716

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Pectin degrading enzymes derived from or endogeneous to Bacillus licheniformis or other Bacillus species which are at least 99% homologous to Bacillus licheniformis based on aligned 16S rDNA sequences have optimum activity at pH higher than 8. The pectin degrading enzymes belongs to the enzyme classes pectate lyases (EC 4.2.2.2), pectin lyases (EC 4.2.2.10) and polygalacturonases (EC 3.2.1.15) and are useful in industrial processes under alkaline conditions such as in textile processing and as an active ingredient eg in laundry detergents and hard surface cleaning products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 18 OF 43 USPATFULL on STN
AN 2002:167919 USPATFULL
TI Encapsulation compositions
IN Porzio, Michael A., Monkton, MD, United States
Popplewell, Lewis M., Cockeysville, MD, United States

PA McCormick & Company, Inc., Sparks, MD, United States (U.S. corporation)
PI US 6416799 B1 20020709
AI US 2000-709529 20001113 (9)
RLI Division of Ser. No. US 1999-299733, filed on 27 Apr 1999, now patented,
Pat. No. US 6187351 Division of Ser. No. US 1996-763148, filed on 10 Dec
1996, now patented, Pat. No. US 5897897 Division of Ser. No. US
1995-424572, filed on 17 Apr 1995, now patented, Pat. No. US 5603971
Continuation of Ser. No. US 1993-98885, filed on 29 Jul 1993, now
abandoned Continuation-in-part of Ser. No. US 1993-47196, filed on 16
Apr 1993, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Weier, Anthony J.
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1239

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Carbohydrate-based glassy matrices which are stable in the glassy state
at ambient temperatures may be prepared by the use of aqueous
plasticizers with melt extrusion. Such glassy matrices are useful for
the encapsulation of encapsulates, in particular, flavoring agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 19 OF 43 USPATFULL on STN
AN 2002:75240 USPATFULL
TI Pectate lyases
IN Andersen, Lene Nonboe, Aller.o slashed.d, DENMARK
Schulein, Martin, Copenhagen, DENMARK
Lange, Niels Erik Krebs, Raleigh, NC, United States
Bj.o slashed.rnvad, Mads Eskelund, Fredericksberg, DENMARK
M.o slashed.ller, S.o slashed.ren, Holte, DENMARK
Glad, Sanne O. Schr.o slashed.der, Ballerup, DENMARK
Kauppinen, Markus Sakari, Copenhagen, DENMARK
Schnorr, Kirk, Copenhagen, DENMARK
Kongsbak, Lars, Holte, DENMARK

PA Novozymes A/S, Baegsvaerd, DENMARK (non-U.S. corporation)
PI US 6368843 B1 20020409
AI US 2000-694531 20001023 (9)
RLI Continuation of Ser. No. US 1998-198955, filed on 24 Nov 1998, now
patented, Pat. No. US 6187580 Continuation-in-part of Ser. No. US
1998-73684, filed on 6 May 1998, now patented, Pat. No. US 6124127
Continuation-in-part of Ser. No. US 1998-184217, filed on 2 Nov 1998,
now patented, Pat. No. US 6258590
PRAI DK 1997-1343 19971124
DK 1997-1344 19971124
US 1997-67249P 19971202 (60)
US 1997-67240P 19971202 (60)

DT Utility
FS GRANTED
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Lambris, Eliao J.
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 3435

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel group of pectate lyases comprising the amino acid sequence Asn
Leu Asn Ser Arg Val Pro (NLNSRV) belonging to Family 1 of
polysaccharide lyases have good performance in industrial processes
under neutral or alkaline conditions such as laundering and textile
processing. The pectate lyase may be derivable from Bacillus species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 20 OF 43 USPATFULL on STN
AN 2001:147735 USPATFULL
TI Pectate lyases
IN Andersen, Lene Nonboe, Aller.o slashed.d, Denmark
Schulein, Martin, Copenhagen, Denmark
Lange, Niels Erik Krebs, Raleigh, NC, United States
PA Novozymes A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 6284524 B1 20010904
AI US 2000-546762 20000411 (9)
RLI Division of Ser. No. US 1998-73684, filed on 6 May 1998, now patented,
Pat. No. US 6124127
PRAI DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Lambris, Elias J.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1365

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to microbial pectate lyases, more specifically to microbial enzymes exhibiting pectate lyase activity as their major enzymatic activity in the neutral and alkaline pH ranges, to a method of producing such an enzyme, and to methods for using such enzymes in the textile, detergent and cellulose fiber processing industries.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 21 OF 43 USPATFULL on STN
AN 2001:142136 USPATFULL
TI Pectate lyases
IN Andersen, Lene Nonboe, Aller.o slashed.d, Denmark
Schulein, Martin, Copenhagen, Denmark
Lange, Niels Erik Krebs, Raleigh, NC, United States
PA Novozymes A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 6280995 B1 20010828
AI US 2000-546500 20000411 (9)
RLI Division of Ser. No. US 1998-73684, filed on 6 May 1998, now patented,
Pat. No. US 6124127
PRAI DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Lambiris Esq., Elias
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1355

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relate to microbial pectate lyase, more specifically to microbial enzyme exhibiting pectate lyase activity as their major enzymatic activity in neutral and alkaline pH ranges, to a method of producing such an enzyme, and a method for using such enzymes in the textile, detergent, and cellulose fiber processing industries.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 22 OF 43 USPATFULL on STN
AN 2001:22026 USPATFULL

TI Pectate lyases
 IN Andersen, Lene Nonboe, Aller.o slashed.d, Denmark
 Schulein, Martin, Copenhagen, Denmark
 Lange, Niels Erik Krebs, Raleigh, NC, United States
 Bj.o slashed.rnvad, Mads Eskelund, Frederiksberg, Denmark
 M.o slashed.ller, S.o slashed.ren, Holte, Denmark
 Glad, Sanne O. Schr.o slashed.der, Ballerup, Denmark
 Kauppinen, Markus Sakari, Copenhagen, Denmark
 Schnorr, Kirk, Copenhagen, Denmark
 Kongsbak, Lars, Holte, Denmark
 PA Novo Nordisk A/S, Bagsv.ae butted.d, Germany, Federal Republic of
 (non-U.S. corporation)
 PI US 6187580 B1 20010213
 AI US 1998-198955 19981124 (9)
 PRAI DK 1997-1343 19971124
 DK 1997-1344 19971124
 US 1997-67249P 19971202 (60)
 US 1997-67240P 19971202 (60)
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Nashed, Nashaat T.
 LREP Lambiris, Esq., Elias J., Green, Esq., Reza
 CLMN Number of Claims: 23
 ECL Exemplary Claim: 1
 DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
 LN.CNT 2825

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel group of pectate lyases comprising the amino acid sequence Asn
 Leu Asn Ser Arg Val Pro (NLNSRVVP) belonging to Family 1 of
 polysaccharide lyases have good performance in industrial processes
 under neutral or alkaline conditions such as laundering and textile
 processing. The pectate lyase are derivable from Bacillus species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 23 OF 43 USPATFULL on STN
 AN 2001:21799 USPATFULL
 TI Encapsulation compositions
 IN Porzio, Michael A., Monkton, MD, United States
 Popplewell, Lewis M., Cockeysville, MD, United States
 PA McCormick & Company, Inc., Sparks, MD, United States (U.S. corporation)
 PI US 6187351 B1 20010213
 AI US 1999-299733 19990427 (9)
 RLI Division of Ser. No. US 1996-763148, filed on 10 Dec 1996, now patented,
 Pat. No. US 5897897 Division of Ser. No. US 1995-424572, filed on 17 Apr
 1995, now patented, Pat. No. US 5603971 Continuation of Ser. No. US
 1993-98885, filed on 29 Jul 1993, now abandoned Continuation-in-part of
 Ser. No. US 1993-47196, filed on 16 Apr 1993, now abandoned
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Weier, Anthony
 LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
 CLMN Number of Claims: 67
 ECL Exemplary Claim: 1
 DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
 LN.CNT 1399

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Carbohydrate-based glassy matrices which are stable in the glassy state
 at ambient temperatures may be prepared by the use of aqueous
 plasticizers with melt extrusion. Such glassy matrices are useful for
 the encapsulation of encapsulates, in particular, flavoring agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 24 OF 43 USPATFULL on STN

AN 2000:174397 USPATFULL
TI Pectin degrading enzymes from Bacillus licheniformis
IN Andersen, Lene Nonboe, Aller.o slashed.d, Denmark
Schulein, Martin, Copenhagen, Denmark
Lange, Niels Erik Krebs, Raleigh, Denmark
Bj.o slashed.rnvad, Mads Eskelund, Frederiksberg, Denmark
Schnorr, Kirk, Copenhagen, Denmark
PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 6165769 20001226
AI US 1998-198956 19981124 (9)
RLI Continuation-in-part of Ser. No. US 1998-73684, filed on 6 May 1998
PRAI DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Zelson, Esq., Steve T., Green, Esq., Reza
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2893

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Pectin degrading enzymes derived from or endogeneous to Bacillus licheniformis or other Bacillus species which are at least 99% homologous to Bacillus licheniformis based on aligned 16S rDNA sequences have optimum activity at pH higher than 8. The pectin degrading enzymes belongs to the enzyme classes pectate lyases (EC 4.2.2.2), pectin lyases (EC 4.2.2.10) and polygalacturonases (EC 3.2.1.15) and are useful in industrial processes under alkaline conditions such as in textile processing and as an active ingredient eg in laundry detergents and hard surface cleaning products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 25 OF 43 USPATFULL on STN
AN 2000:128161 USPATFULL
TI Pectate lyase
IN Andersen, Lene Nonboe, Aller.o slashed.d, Denmark
Schulein, Martin, Copenhagen .O slashed., Denmark
Lange, Niels Erik Krebs, Raleigh, NC, United States
PA Novo Nordisk A/S, Bagsvaerd, Denmark (non-U.S. corporation)
PI US 6124127 20000926
AI US 1998-73684 19980506 (9)
PRAI DK 1997-1344 19971124
US 1997-67240P 19971202 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Nashed, Nashaat
LREP Zelson, Esq., Steve T., Green, Esq., Reza
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1462

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to microbial pectate lyases, more specifically to microbial enzymes exhibiting pectate lyase activity as their major enzymatic activity in the neutral and alkaline pH ranges, to a method of producing such enzymes, and to methods for using such enzymes in the textile, detergent and cellulose fiber processing industries.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 26 OF 43 USPATFULL on STN
AN 2000:4652 USPATFULL

TI Cloning and expression of DNA encoding a ripening form of a polypeptide
having rhamnogalacturonase activity
IN Musters, Wouter, Wipperspark 138, 3141 RD Maassluis, Netherlands
Stam, Hein, Griend 72, 1112 LG Diemen, Netherlands
Suykerbuyk, Maria E., Normandie 139, 3524 RH Utrecht, Netherlands
Visser, Jacob, Hinkeloordsweg 5, 6703 CK Wageningen, Netherlands
Verbakel, Johannes M., Ingeland 9, 3155 GC Maasland, Netherlands
PI US 6013489 20000111
AI US 1995-536150 19950929 (8)
RLI Division of Ser. No. US 1993-61062, filed on 14 May 1993, now patented,
Pat. No. US 5550045
PRAI EP 1992-201403 19920515
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.
LREP Cushman Darby & Cushman
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 28 Drawing Page(s)
LN.CNT 2809

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to isolation of an Aspergillus gene encoding
rhamnogalacturonase (RG-ase) and the construction of recombinant
Aspergillus strains with overexpression of RG-ase. These strains can be
used for the commercial production of RG-ase. RG-ase is an important
enzyme in processes requiring the degradation and/or modification of
pectin or modification of pectin-containing vegetable or plant cell wall
material. RG-ase may be used in various applications, including the
processing of fruits and vegetables, in the extraction of components
from vegetable material or for improving the functionality of pectin or
pectin-containing vegetable material, food material or plant
cell wall material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 27 OF 43 USPATFULL on STN
AN 1999:50706 USPATFULL
TI Encapsulation compositions
IN Porzio, Michael A., Monkton, MD, United States
Popplewell, Lewis M., Cockeysville, MD, United States
PA McCormick & Company, Inc., Sparks, MD, United States (U.S. corporation)
PI US 5897897 19990427
AI US 1996-763148 19961210 (8)
RLI Division of Ser. No. US 1995-424572, filed on 17 Apr 1995, now patented,
Pat. No. US 5603971 which is a continuation of Ser. No. US 1993-98885,
filed on 29 Jul 1993, now abandoned which is a continuation-in-part of
Ser. No. US 1993-47196, filed on 16 Apr 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Weier, Anthony J.
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1302

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Carbohydrate-based glassy matrices which are stable in the glassy state
at ambient temperatures may be prepared by the use of aqueous
plasticizers with melt extrusion. Such glassy matrices are useful for
the encapsulation of encapsulates, in particular, flavoring agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 28 OF 43 USPATFULL on STN
AN 1998:134887 USPATFULL

TI Cloning and expression of the exo-polygalacturonase gene from
 aspergillus
 IN Kusters-Van Someren, Margo Anne-Rose, Bunnik, Netherlands
 Muller, Yvonne, Arnhem, Netherlands
 Kester, Hermanus Cornelis Maria, Druten, Netherlands
 Visser, Jacob, Wageningen, Netherlands
 Van Ooyen, Albert Johannes Joseph, Voorburg, Netherlands
 Rolin, Claus, K.o slashed.ge, Denmark
 PA Gist-Brocades, N.V., Ma Delft, Netherlands (non-U.S. corporation)
 PI US 5830737 19981103
 AI US 1997-780869 19970124 (8)
 RLI Division of Ser. No. US 1994-290978, filed on 17 Oct 1994, now patented,
 Pat. No. US 5624834
 PRAI NL 1992-204093 19921224
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Patterson, Jr., Charles L.
 LREP Morrison & Foerster
 CLMN Number of Claims: 19
 ECL Exemplary Claim: 1
 DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
 LN.CNT 1366

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The exo-polygalacturonase gene from Aspergillus is identified, and the
 enzyme encoded thereby is expressed. Specifically, the
 exo-polygalacturonase gene from Aspergillus tubingensis is is cloned and
 expressed, and DNA sequences from other Aspergillus strains that
 specifically hybridize therewith are identified. Novel expression
 vectors that comprise an exo-polygalacturonase encoding sequence, and
 host cells transformed therewith, are also provided. The invention
 further relates to the production of recombinant exo-polygalacturonase,
 and to the use of this protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 29 OF 43 USPATFULL on STN
 AN 97:36095 USPATFULL
 TI Cloning and expression of the exo-polygalacturonase gene from
 aspergillus
 IN Kusters-Van Someren, Margo A., Bunnik, Netherlands
 Muller, Yvonne, Arnhem, Netherlands
 Kester, Hermanus C. M., Druten, Netherlands
 Visser, Jacob, Wageningen, Netherlands
 Van Ooyen, Albert J. J., Voorburg, Netherlands
 Rolin, Claus, K.o slashed.ge, Denmark
 PA Gist-brocades, B.V., Netherlands (non-U.S. corporation)
 PI US 5624834 19970429
 WO 9414966 19940707
 AI US 1994-290978 19941017 (8)
 WO 1993-EP3704 19931224
 19941017 PCT 371 date
 19941017 PCT 102(e) date
 PRAI EP 1992-204093 19921224
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Patterson, Jr., Charles L.
 LREP Morrison & Foerster LLP
 CLMN Number of Claims: 9
 ECL Exemplary Claim: 1
 DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
 LN.CNT 1265

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention discloses a DNA sequence encoding the
 exo-polygalacturonase gene form Aspergillus. Specifically the
 Aspergillus tubigensis exo-polygalacturonase gene is cloned and

expressed. The invention relates to vectors comprising the
exo-polygalacturonase coding sequence and to host cells transformed with
such vectors. The invention further relates to the production of
recombinant exo-polygalacturonase and the use of this protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 30 OF 43 USPATFULL on STN
AN 97:14450 USPATFULL
TI Encapsulation compositions
IN Porzio, Michael A., Monkton, MD, United States
Popplewell, Lewis M., Cockeysville, MD, United States
PA McCormick & Company, Inc., Sparks, MD, United States (U.S. corporation)
PI US 5603971 19970218
AI US 1995-424572 19950417 (8)
RLI Continuation of Ser. No. US 1993-98885, filed on 29 Jul 1993, now
abandoned which is a continuation-in-part of Ser. No. US 1993-47196,
filed on 16 Apr 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Weier, Anthony J.
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1237

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Carbohydrate-based glassy matrices which are stable in the glassy state
at ambient temperatures may be prepared by the use of aqueous
plasticizers with melt extrusion. Such glassy matrices are useful for
the encapsulation of encapsulates, in particular, flavoring agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 31 OF 43 USPATFULL on STN
AN 97:1347 USPATFULL
TI Methods of detecting and isolating a ripening form of a polypeptide
having rhamnogalacturonase activity
IN Musters, Wouter, Maassluis, Netherlands
Stam, Hein, Diemen, Netherlands
Suykerbuyk, Maria E., Utrecht, Netherlands
Visser, Jacob, Wageningen, Netherlands
Verbakel, Johannes M., Maasland, Netherlands
PA Unilever Patent Holdings, B.V., Vlaardingen, Netherlands (non-U.S.
corporation)
PI US 5591620 19970107
AI US 1995-536242 19950929 (8)
RLI Division of Ser. No. US 1993-61062, filed on 14 May 1993
PRAI EP 1992-201403 19920515
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny
Allen
LREP Cushman Darby & Cushman, L.L.P.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 39 Drawing Figure(s); 28 Drawing Page(s)
LN.CNT 2088

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to isolation of an Aspergillus gene encoding
rhamnogalacturonase (RG-ase) and the construction of recombinant
Aspergillus strains with overexpression of RG-ase. These strains can be
used for the commercial production of RG-ase. RG-ase is an important
enzyme in processes requiring the degradation and/or modification of
pectin or modification of pectin-containing vegetable or plant cell wall

material. RG-ase may be used in various applications, including the processing of fruits and vegetables, in the extraction of components from vegetable material or for improving the functionality of pectin or pectin-containing vegetable material, food material or plant cell wall material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 32 OF 43 USPATFULL on STN
AN 96:77701 USPATFULL
TI Cloning and expression of DNA encoding a ripening form of a polypeptide having rhamnogalacturonase activity
IN Musters, Wouter, Maassluis, Netherlands
Stam, Hein, Diemen, Netherlands
Suykerbuyk, Maria E., Utrecht, Netherlands
Visser, Jacob, Wageningen, Netherlands
Verbakel, Johannes M., Maasland, Netherlands
PA Unilever Patent Holdings, B.V., Vlaardingen, Netherlands (non-U.S. corporation)
PI US 5550045 19960827
AI US 1993-61062 19930514 (8)
PRAI EP 1992-201403 19920515
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Kim, Hyosuk
LREP Cushman Darby & Cushman, L.L.P.
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN 40 Drawing Figure(s); 28 Drawing Page(s)
LN.CNT 2423

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to isolation of an Aspergillus gene encoding rhamnogalacturonase (RG-ase) and the construction of recombinant Aspergillus strains with overexpression of RG-ase. These strains can be used for the commercial production of RG-ase. RG-ase is an important enzyme in processes requiring the degradation and/or modification of pectin or modification of pectin-containing vegetable or plant cell wall material. RG-ase may be used in various applications, including the processing of fruits and vegetables, in the extraction of components from vegetable material or for improving the functionality of pectin or pectin-containing vegetable material, food material or plant cell wall material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 33 OF 43 USPATFULL on STN
AN 96:36594 USPATFULL
TI Dietary vaccine for inhibiting metabolism of methanol
IN Monte, Woodrow C., 542 W. 16th St., Tempe, AZ, United States 85281
PI US 5512598 19960430
AI US 1990-500129 19900328 (7)
RLI Continuation-in-part of Ser. No. US 1988-290364, filed on 29 Dec 1988, now patented, Pat. No. US 4931432 which is a continuation of Ser. No. US 1987-47673, filed on 6 May 1987, now patented, Pat. No. US 4834981
DT Utility
FS Granted
EXNAM Primary Examiner: Cintins, Marianne M.; Assistant Examiner: Jarvis, William R. A.
LREP Nissle, Tod R.
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 742

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for inhibiting the metabolism of methanol in a human is

disclosed. The method comprises administering a source of ethanol introduced into the respiratory tract of a human being, permitting the gradual time release of ethanol from the dietary vaccine into the respiratory tract for absorption into the blood stream of an individual.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 34 OF 43 USPATFULL on STN
AN 95:99079 USPATFULL
TI Multienzyme powdered composition containing bacteria for treatment of waste
IN Bruno, Mark, Raleigh, NC, United States
PA Enzyme Research & Development Corporation, Gilberts, IL, United States (U.S. corporation)
PI US 5464766 19951107
AI US 1994-222108 19940404 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Naff, David M.; Assistant Examiner: Ware, Deborah K.
LREP Tolpin, Thomas W.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 980

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A stabilized dust-free powdered enzyme/bacterial fermentation product is provided for readily treating drains, septic tanks, distribution boxes, holding tanks, drain fields, sewer lines, dry wells, grease traps, compost heaps, and garbage disposals. The stabilized powdered formulation effectively digests and liquifies most organic wastes flushed into on-site waste disposal systems. The environmentally attractive product can also be used for regular periodic sludge pumpouts. The waste-digesting composition can include: enzymes, enzyme preservatives, enzyme activators, nonpathogenic aerobic and anaerobic bacteria, bacterial nutrients, buffers, emulsifiers, and heavy metal scavengers. In a preferred embodiment the composition contains multiple enzymes having less than 26% by weight of the total weight of the composition, and specifically 0.1% to 15% protease, 0.1% to 15% amylase, 0.1% to 15% cellulase, 0.1% to 15% lipase, 0.1% to 15% Bacillus species, 0.1% to 20% phosphate-containing buffer compounds, such as monosodium phosphate, 1% to 20% enzyme preservative, and 0.1% to 10% ion scavenger compounds, as well as 50% to 95% dendritic salts also providing a buffering effect for the composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 35 OF 43 USPATFULL on STN
AN 95:80233 USPATFULL
TI Pectin lyase genes of aspergillus niger
IN Heim, Jutta, Ramllinsburg, Switzerland
Meyhack, Bernd, Magden, Switzerland
Gysler, Christof, Blonay, Switzerland
Visser, Jacob, Wageningen, Netherlands
Kester, Hermanus C. M., Druten, Netherlands
PA Ciba-Geigy Corporation, Ardsley, NY, United States (U.S. corporation)
PI US 5447862 19950905
AI US 1991-723002 19910628 (7)
RLI Continuation-in-part of Ser. No. US 1988-150880, filed on 29 Jan 1988, now abandoned And a continuation-in-part of Ser. No. US 1989-384898, filed on 24 Jul 1989, now abandoned
PRAI GB 1987-2475 19870204
GB 1988-18046 19880728
GB 1989-14666 19890626
DT Utility
FS Granted

EXNAM Primary Examiner: Schwartz, Richard A.; Assistant Examiner: Ketter, James

LREP Elmer, James Scott

CLMN Number of Claims: 49

ECL Exemplary Claim: 1

DRWN 22 Drawing Figure(s); 22 Drawing Page(s)

LN.CNT 4188

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Recombinant DNA molecules coding for pectin lyase (PL) expression systems and derivatives thereof, such as the structural genes of PLA, PLB, PLC, PLD, PLE and PLF, and corresponding regulatory sequences, e.g. promoter, signal and terminator sequences, and hybrid vectors comprising corresponding DNAs, including hybrid vectors with DNA coding for homologous or heterologous polypeptides, hosts, especially filamentous fungi, e.g. Aspergillus hosts, transformed by said vectors, methods for the preparation of said recombinant DNA molecules and said hosts and the use of the recombinant DNA molecules for the preparation of new expression systems. A further objective is the preparation of polypeptides by means of said DNAs and said hosts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 36 OF 43 USPATFULL on STN

AN 90:44499 USPATFULL

TI Dietary vaccine for inhibiting metabolism of methanol

IN Monte, Woodrow C., 542 W. 16th St., Tempe, AZ, United States 85281

PI US 4931432 19900605

AI US 1988-290364 19881229 (7)

RLI Continuation of Ser. No. US 1987-47673, filed on 6 May 1987, now patented, Pat. No. US 4834981

DT Utility

FS Granted

EXNAM Primary Examiner: Griffin, Ronald W.; Assistant Examiner: Webber, Pamela S.

LREP Nissle, Tod R.

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 558

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Apparatus and a method for inhibiting the metabolism of methanol in a human. The apparatus comprises carrier means for a source of ethanol. The carrier means, when combined with a source of ethanol and introduced in the digestive tract of a human being, permits the gradual time release of ethanol from the dietary vaccine into the digestive tract for absorption into the blood system of an individual. The method comprises introducing the ethanol charged carrier means in the digestive tract of an individual.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 37 OF 43 USPATFULL on STN

AN 89:43145 USPATFULL

TI Dietary vaccine for inhibiting metabolism of methanol

IN Monte, Woodrow C., 542 W. 16th St., Tempe, AZ, United States 85281

PI US 4834981 19890530

AI US 1987-47673 19870506 (7)

DT Utility

FS Granted

EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Horne, Leon R.

LREP Nissle, Tod R.

CLMN Number of Claims: 3

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 491

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Apparatus and a method for inhibiting the metabolism of methanol in a human. The apparatus comprises carrier means for a source of ethanol. The carrier means, when combined with a source of ethanol and introduced in the digestive tract of a human being, permits the gradual time release of ethanol from the dietary vaccine into the digestive tract for absorption into the blood stream of an individual. The method comprises introducing the ethanol charged carrier means in the digestive tract of an individual.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 38 OF 43 USPATFULL on STN

AN 83:49490 USPATFULL

TI Method for grinding cereal grains in the presence of grinding aids

IN Bermudez, Mauricio, Miami, FL, United States

Klimpel, Richard R., Midland, MI, United States

Sands, Steven D., Midland, MI, United States

PA The Dow Chemical Company, Midland, MI, United States (U.S. corporation)

PI US 4411927 19831025

AI US 1982-393566 19820630 (6)

RLI Continuation-in-part of Ser. No. US 1980-195977, filed on 10 Oct 1980, now abandoned which is a continuation-in-part of Ser. No. US 1980-114036, filed on 21 Jan 1980, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Jones, Raymond N.; Assistant Examiner: Hatcher, Elizabeth A.

CLMN Number of Claims: 7

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 427

AB Cereal grains, particularly corn, are effectively ground in the presence of an aqueous grinding medium by employing a hydrophilic polysaccharide, e.g., a cellulose ether such as hydroxypropyl methylcellulose, as a grinding aid.

L7 ANSWER 39 OF 43 USPAT2 on STN

AN 2003:37230 USPAT2

TI Encapsulation compositions

IN Porzio, Michael A., Monkton, MD, United States

Popplewell, Lewis M., Cockeysville, MD, United States

PA McCormick & Company, Inc., Sparks, MD, United States (U.S. corporation)

PI US 6652895 B2 20031125

AI US 2002-142882 20020513 (10)

RLI Division of Ser. No. US 2000-709529, filed on 13 Nov 2000, now patented, Pat. No. US 6416799 Division of Ser. No. US 1999-299733, filed on 27 Apr 1999, now patented, Pat. No. US 6187351 Division of Ser. No. US 1996-763148, filed on 10 Dec 1996, now patented, Pat. No. US 5897897 Division of Ser. No. US 1995-424572, filed on 17 Apr 1995, now patented, Pat. No. US 5603971 Continuation of Ser. No. US 1993-98885, filed on 29 Jul 1993, now abandoned Continuation-in-part of Ser. No. US 1993-47196, filed on 16 Apr 1993, now abandoned

DT Utility

FS GRANTED

EXNAM Primary Examiner: Weier, Anthony J.

LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

CLMN Number of Claims: 33

ECL Exemplary Claim: 1

DRWN 1 Drawing Figure(s); 1 Drawing Page(s)

LN.CNT 1348

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Carbohydrate-based glassy matrices which are stable in the glassy state at ambient temperatures may be prepared by the use of aqueous

plasticizers with melt extrusion. Such glassy matrices are useful for the encapsulation of encapsulates, in particular, flavoring agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 40 OF 43 USPAT2 on STN
AN 2003:23735 USPAT2
TI Cell-wall degrading enzyme variants
IN Schr.o slashed.der Glad, Sanne O, Ballerup, DENMARK
Andersen, Carsten, V.ae butted.rl.o slashed.se, DENMARK
Schulein, Martin, late of Copenhagen, DENMARK deceased
Hanne Dela, United States legal representative
Frandsen, Torben Peter, Frederiksberg, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PI US 6607902 B2 20030819
AI US 2001-910505 20010719 (9)
PRAI DK 2000-200100705 20000504
DK 2000-1117 20000719
DK 2001-734 20010510
US 2001-290724P 20010514 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Lambiris, Elias J.
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 2462

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A variant of a cell-wall degrading enzyme having a beta-helix structure, which variant holds at least one substituent in a position determined by identifying all residues potentially belonging to a stack; characterising the stack as interior or exterior; characterising the stack as polar, hydrophobic or aromatic/heteroaromatic based on the dominating characteristics of the parent or wild-type enzyme stack residues and/or its orientation relative to the beta-helix (interior or exterior); optimizing all stack positions of a stack either to hydrophobic aliphatic amino acids, hydrophobic aromatic or polar amino acids by allowing mutations within one or all positions to amino acids belonging to one of these groups; measuring thermostability of the variants by DSC or an application-related assay such as a Pad-Steam application test; and selecting the stabilized variants. Variant of a wild-type parent pectate lyase (EC 4.2.2.2) having the conserved amino acid residues D111, D141 or E141, D145, K165, R194 and R199 when aligned with the pectate lyase comprising the amino acid sequence of SEQ ID NO: 2 are preferred.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 41 OF 43 USPAT2 on STN
AN 2003:17924 USPAT2
TI Production of **polygalacturonides** and their use as food additives
IN Lang, Christine, Berlin, GERMANY, FEDERAL REPUBLIC OF
Dornenburg, Heike, Berlin, GERMANY, FEDERAL REPUBLIC OF
PA Technische Universitat Berlin, Berlin, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6696554 B2 20040224
WO 2001076609 20011018
AI US 2002-9055 20020225 (10)
WO 2001-EP3998 20010406
PRAI DE 2000-10019076 20000406
DT Utility
FS GRANTED
EXNAM Primary Examiner: Wilson, James O.; Assistant Examiner: Krishnan,

Ganapathy
LREP Rothwell Figg Ernst & Manbeck
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 475

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to the use of **polygalacturonides** as **food** additives, said **polygalacturonides** being obtainable via the following process steps:

- a) a pectinous plant material is subjected to a pectin extraction in aqueous solution;
- b) the solids are removed from the suspension obtained in step a), consisting of liquid phase including dissolved pectin and solids from the plant material;
- c) the pectin is precipitated from the liquid phase obtained in step b);
- d) the pectin obtained in step c) is dissolved in an aqueous solution and cleaved with purified endo-polygalacturonase;
- e) the **polygalacturonides** obtained in step d) are processed into a **polygalacturonide** preparation without using an additional separation step and without hydrolyzing ester groups that are present.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 42 OF 43 USPAT2 on STN
AN 2002:258868 USPAT2
TI Pectate lyases
IN Andersen, Lene Nonboe, Allerod, DENMARK
Schulein, Martin, late of Copenhagen, DENMARK legal representative
Hanne Dela
Lange, Niels Erik Krebs, Raleigh, NC, United States
Bj.o slashed.rnvad, Mads Eskelund, Frederiksberg, DENMARK
M.o slashed.ller, S.o slashed.ren, Holte, DENMARK
Glad, Sanne O. Schroder, Ballerup, DENMARK
Kauppinen, Markus Sakari, Copenhagen N, DENMARK
Schnorr, Kirk, Copenhagen N, DENMARK
Kongsbak, Lars, Holte, DENMARK
PA Novozymes A/S, Bagsvaerd, DENMARK (non-U.S. corporation)
PI US 6677147 B2 20040113
AI US 2002-72152 20020207 (10)
RLI Continuation of Ser. No. US 2000-694531, filed on 23 Oct 2000, now patented, Pat. No. US 6368843 Continuation of Ser. No. US 1998-198955, filed on 24 Nov 1998, now patented, Pat. No. US 6187580
Continuation-in-part of Ser. No. US 1998-73684, filed on 6 May 1998, now patented, Pat. No. US 6124127 Continuation-in-part of Ser. No. US 1998-184217, filed on 2 Nov 1998, now patented, Pat. No. US 6258590
PRAI US 1997-67240P 19971202 (60)
US 1997-67249P 19971202 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Nashed, Nashaat T.
LREP Lambiris, Elias J.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 3344

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to pectate lyases comprising the amino acid sequence Asn Leu Asn Ser Arg Val Pro (NLNSRVP) (SEQ ID NO: 2)

belonging to Family 1 of polysaccharide lyases have good performance in industrial processes under neutral or alkaline conditions such as laundering and textile processing. The pectate lyase may be derivable from *Bacillus* species.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 43 OF 43 WPINDEX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2002-050102 [07] WPINDEX
DNC C2002-014338
TI Preparation of **polygalacturonides**, used as food additives, comprises extraction of pectin, separation and precipitation, then contacting with endo-galacturonase, to form **polygalacturonide** without separation/hydrolysis of ester groups.
DC A97 D13 D16
IN DOERNENBURG, H; LANG, C P; LANG, C; DORNENBURG, H
PA (LANG-I) LANG C; (DORN-I) DORNENBURG H; (UYBE-N) UNIV BERLIN TECH
CYC 95
PI DE 10019076 A1 20011018 (200207)* 5
WO 2001076609 A1 20011018 (200207) GE
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001054791 A 20011023 (200213)
EP 1191936 A1 20020403 (200230) GE
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR
US 2003013678 A1 20030116 (200308)
JP 2003530096 W 20031014 (200368) 18
US 6696554 B2 20040224 (200415)
US 2004146635 A1 20040729 (200450)
ADT DE 10019076 A1 DE 2000-10019076 20000406; WO 2001076609 A1 WO 2001-EP3998
20010406; AU 2001054791 A AU 2001-54791 20010406; EP 1191936 A1 EP
2001-927891 20010406, WO 2001-EP3998 20010406; US 2003013678 A1 WO
2001-EP3998 20010406, US 2002-9055 20020225; JP 2003530096 W JP
2001-574125 20010406, WO 2001-EP3998 20010406; US 6696554 B2 WO
2001-EP3998 20010406, US 2002-9055 20020225; US 2004146635 A1 Div ex WO
2001-EP3998 20010406, Div ex US 2002-9055 20020225, US 2004-759294
20040120
FDT AU 2001054791 A Based on WO 2001076609; EP 1191936 A1 Based on WO
2001076609; JP 2003530096 W Based on WO 2001076609; US 6696554 B2 Based on
WO 2001076609; US 2004146635 A1 Div ex US 6696554
PRAI DE 2000-10019076 20000406
AN 2002-050102 [07] WPINDEX
AB DE 10019076 A UPAB: 20020130
NOVELTY - Preparation of **polygalacturonides** (I), comprises the steps of: extraction of pectin from plant material; separation of solids from the suspension; precipitation of pectin from the liquid phase; contacting the pectin with aqueous solution and mixing with endo-galacturonase; and converting to a **polygalacturonide** preparation without further separation or hydrolysis of the ester groups.
DETAILED DESCRIPTION - The **polygalacturonides** are obtained by:
(a) extracting pectin from plant material in aqueous solution;
(b) separating the solids from the resultant suspension in a liquid phase (II) containing dissolved pectin (III);
(c) precipitating the dissolved pectin from the liquid phase;
(d) bringing the dissolved pectin into aqueous solution and mixing with purified endo-galacturonase; and
(e) conversion to a **polygalacturonide** preparation, without further separation or hydrolysis of the ester groups present.
USE - The **polygalacturonides** (I) are used as food

additives (claimed), e.g. in baby food, canned and bottled foods, drinks, confectionery, baked goods, chips etc.

ADVANTAGE - The present additive improves the flavor and (optionally) the consistency and/or other properties of food. As endo-polygalacturonase only cuts the bonds of bonds of naturally unesterified galacturonic acid and the ester groups are not hydrolyzed, most of the polygalacturonides have 5-20 monomer units. The mixtures of mainly saturated oligosaccharides with side chains increase the immune response and also act as ballast, making them useful in prophylaxis and therapy of many diseases, e.g. constipation, diverticulosis, colon cancers, diabetes mellitus and lipid exchange problems. They reduce binding of essential nutrients, which is a disadvantage of commercially-available ballast substances.

Dwg.0/0

=> dis hist

(FILE 'HOME' ENTERED AT 12:47:19 ON 02 SEP 2004)

FILE 'APOLLIT, BABS, CAPLUS, CBNB, CEN, CIN, DISSABS, EMA, IFIPAT, JICST-EPLUS, PASCAL, PLASNEWS, PROMT, RAPRA, SCISEARCH, TEXTILETECH, USPATFULL, USPAT2, WPIFV, WPINDEX, WTEXTILES' ENTERED AT 12:47:33 ON 02 SEP 2004

L1	14794 S POLYGALACTURON?
L2	5250 S L1 AND (FOOD OR DRINK OR COMPOSITION OR NUTRACEUTICAL)
L3	268 S L2 AND TASTE
L4	26 S L2 AND (BABY(W)FOOD)
L5	0 S PLYGALACTURONIDE
L6	166 S POLYGALACTURONIDE
L7	43 S L6 AND (FOOD OR DRINK OR BEVERAGE OR NUTRACEUTICAL)

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	230.90	231.11
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-4.20	-4.20

STN INTERNATIONAL LOGOFF AT 12:55:39 ON 02 SEP 2004